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### CATALOGUE

OF THE

# MESOZOIC PLANTS

IN THE

# DEPARTMENT OF GEOLOGY.

PART V.



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### PREFACE.

THE present work is a continuation of the series of Catalogues of the Mesozoic Plants in the British Museum. The fossils discussed are even more fragmentary than most of those by which the Jurassic and Wealden Floras are represented; but the Cretaceous Flora is of so much interest as affording possible links with the succeeding Tertiary Flora, that even imperfect evidence is worthy of the closest attention. The literature of the subject is already voluminous, but so many names have been given to these fossils without adequate definition, that it seems unnecessary at present to do more than enumerate them. The greater portion of Part I. of the Catalogue is therefore devoted to an exhaustive bibliography, containing many references to published work which will not occur again in the Descriptive Catalogue.

A. SMITH WOODWARD.

DEPARTMENT OF GEOLOGY, November, 1913.

# AUTHOR'S PREFACE.

When, nearly five years ago, I began a general consideration of the Cretaceous flora, at the request of the British Museum. I discovered that the task could make no progress until a list of the material had been compiled. The literature dealing with Cretaceous plants was widely scattered and had never been brought together and sifted, and there was no standard work to which reference could be made to place the innumerable names which have been published. Consequently, I first endeavoured to compile a list, as nearly complete as possible, of all the Cretaceous species originally described. This list proved immensely greater than was anticipated, and bulks largely in the present volume. As my own work would have been impossible without it, I trust it may prove useful to others; and therefore propose to mention a few points in explanation of its apparent lack of uniformity and its arbitrariness.

In the first place, while including the American Lower Cretaceous species, the list does not take account of most of the European Wealden species. This is not my own choice, but depends on the fact that in this series of Museum Catalogues, the Wealden has been dealt with by Prof. Seward, and the work allotted to me is to complete the Cretaceous, but to leave out of consideration the parts covered by Prof. Seward's work.

Secondly, anyone using the list will notice that the same strata are mentioned under different names, and that the most recent stratigraphical nomenclature is seldom used. This is because the list does not profess to be critical, but takes the name and the horizon given by the original describer of each species. Therefore, the names of a number of the horizons will be recognisably out of date; but I thought it useful to have the original descriptions catalogued for reference. Further, a number of plants from the Laramie have been included in the list, because in many cases they were described as Cretaceous, though they may be well known to-day to belong to the Tertiary. I included most of those species which had been much quoted as Cretaceous, because it appeared to me that for a reader not intimately acquainted with the Cretaceous, it would be useful to have a list in which references to the original descriptions could readily be found.

Lastly, a point which may make the list appear very incomplete, must be mentioned. Many of the species originally described under one genus have been removed from genus to genus at the hands of various writers. If all the species had been entered under all the generic names ever given to them, the list would have been even bulkier than it is at present. Consequently, while I endeavoured to enter in my list any re-naming that was enlightening, or accompanied by any original work on the specimen, I deliberately left out many of the cases (which are so numerous relating to badly preserved leaf-impressions) in which a species had been transferred to various genera on the grounds of nomenclatorial rules or the personal preferences of an author who neither re-figured nor re-described the specimen, nor in any way added to our knowledge of it. Nevertheless, a good many cross-references to the different genera under which a species appears, will be found. As an example of the type of name which I have tended (perhaps arbitrarily) to omit, Dryopteris virginica may be mentioned. Under Aspidium Fontaine described a considerable number of species. A. virginicum among them. In Knowlton's list of Cretaceous plants, 1898, he transfers most of these to the genus Dryopteris, his entry regarding them being in this form: "Dryopteris virginica (Font.) n. comb.," followed by reference to Fontaine's

original description. Now, in my list, this species appears under Aspidium, with a remark that it was re-named by Knowlton Dryopteris; but it is not entered again by me under Dryopteris. On the other hand, various species similarly treated by Knowlton and others do find their place in my list under two or even more genera: in most cases this depends on the fact that where I have found a name used in the general literature, or where for some reason it appeared useful to have the different references to the plant, I have added it to my list.

Even after the list was restricted in this fashion, it proved so bulky that only the Thallophyta could be dealt with critically in the present volume. Other portions of the Cretaceous Flora will be considered as is convenient in future volumes.

It is certain that there are many errors in this work, though I have laboured to avoid them. Those who have done any task of the kind will realise how difficult it is to deal with such enormous numbers of references, particularly when parts of the text have to be printed off before the later sections are revised.

In the course of the preparatory work I have travelled much, and though much of the help here mentioned will not bear fruit till the future volumes are completed, I should like to say here how greatly I am indebted to friends and officials for help in the work and for facilities for examining specimens in numerous museums on the Continent and in America. Above all I must thank Mr. W. E. Balston and the Government Grant Committee of the Royal Society of London, for grants partially to defray the cost of these journeys.

Among so many who have rendered assistance in various forms, it seems invidious to single out persons for special thanks, but mention must be made of the kindness of the authorities and staff of the National Museum in Washington, where I had the advantage not only of examining many type-specimens, but also of comparing their bibliographic slips with mine, whereby I gained many additions to my lists. Prof. Nathorst has been most helpful both when on his visits to London and in Stockholm, where he placed the remarkable

State Collections at my disposal. In America, Drs. Knowlton, Hollick, and Berry, and Mr. White were most kind and helpful; as were Dr. Britton of New York, whose great Institute gave me hospitality and the use of the plant collections for some time, and Prof. Jeffrey of Cambridge, who showed me several of his valuable specimens. In Canada, the Director of the Geological Survey was most kind in Ottawa, and also loaned some specimens for further examination in London. In Europe the following must be specially mentioned:-Prof. Rothpletz, Dr. Gothan, Dr. Halle, Dr. Ravn, Prof. Seward, Prof. Oliver, and Dr. Arber, for all have from time to time exerted themselves on my behalf, loaned specimens, or given me help. In the British Museum I also have to thank Dr. Smith Woodward, Dr. Rendle, and Dr. Bather, besides Mr. Gepp and Mr. Newton: while Mr. Sherborn's unique knowledge of old and troublesome books and incomplete bibliographical references has several times proved invaluable.

MARIE C. STOPES.

August, 1913.

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# INTRODUCTION.

The Cretaceous Flora differs fundamentally from all the older floras in the presence (and in many places the preponderance) of Dicotyledonous and Monocotyledonous plants with the older and "simpler" families. The Angiosperms must undoubtedly trace their ancestors further back than the lowest Cretaceous, but for practical purposes of geology they may almost be described as appearing in the Cretaceous period. Numerous species of Angiosperms have been described and figured from all parts of the world, and these with the other families, which are represented to a greater or less extent, make the Cretaceous flora exceedingly rich as well as interesting. The deposits in some parts of Europe, in Japan, and the Arctic regions, but more particularly in the North American continent, cover large geographical areas and have yielded a great number both of specimens and of species.

To encompass in any one work a description which is more than a mere compilation, of the whole of this vast flora, is impossible in the present state of the science. For in the work on the Cretaceous epoch more perhaps than in that on any other geological period, the data on which determinations have been made are often very unsatisfactory, and the species described have in many cases been named with no regard to the necessity of previous careful comparisons; while generalisations regarding distribution and climate have often been risked on little There exists no general account of the flora, the bibliography is widely scattered and has never been brought together, and the numerous specific names scattered through the literature have never been listed. The present volume by bringing these things together may prove a useful foundation for future work. I do not think the time has arrived for generalisations or broad conclusions of the kind sometimes attempted by palæobotanists.

One of the difficulties of work on the Cretaceous flora is the correlation of the many scattered deposits in which the plants have been found. So many local names have been given to beds in different places, that it is difficult to realise sometimes to which period the described plants belong. Added to this is the fact that, particularly in America, the relative positions of the beds are still largely undecided, and individual writers use terms in very different senses. I have not attempted exact correlations, but in the accompanying table \* (opposite) have placed in series roughly in their relative positions, the principal beds from which important Cretaceous plants are described. It does not represent the relative thicknesses of the deposits, or, indeed, the final and exact relation of the series, but has merely a temporary value for the convenience of workers not specially acquainted with the beds.

It may also prove of use to give a short summary of the more important work that has been done on the deposits in various parts of the world, thus indicating the distribution of Cretaceous plants in the various countries. Full references to the papers mentioned will be found in the bibliography which follows.

#### AUSTRIA.

Unger (in 1867) described both Senonian and Cenomanian plants from three principal localities, viz. Ischl, Sanet Wolfgang, and Neue Welt. In 1871 a Schenk published a monograph on the Urgonian deposits of Wernsdorf and Teschen, with notes on some specimens from neighbouring localities. Schenk also (1876) described eight species of Senonian plants from the northern Tyrol, at Brandenberg.

Of Bohemia, much is known owing to the work of many notable palæobotanists. Corda (1846) in Reuss, described a number of Cenomanian plants from Trziblitz, Perutz and other localities. The Perucer Beds have been the subject of numerous

\* Note.—This table is for the use of those to whom the local names of horizons are unfamiliar. It does not possess any finality, as the correlations vary with individual judgment. It is based partly on published correlation-tables, partly on the advice of several European and American geologists, and may be regarded as representing approximately the relations of the principal horizons in the more important localities where Cretaceous plants are found.

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in.	Ranocas.	nnce. ennep. ear Paw. idith River.	Wanting.		Vancouver Island.
h.	Monmout	nggett. gle. obrara. lorado.	Chico.		
	Magothy.				Peace River.
•	Raritan.*			5.5	Mill Creek.
mity?	Patapsco			Fuson.	,
	hiatus.		Unconformity.		
	Arundel.				
	ı			Lakota.	Queen Charlotte Island.
	Patuxen	ptanie.	Horsetown Shasta.		Kootanie.
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later papers. Kreijci (1853) wrote in Bohemian, as did Renger in 1866. Renger (1866 A) had a paper on the Cretaceous treeferns of Bohemia. Important work was done by Feistmantel (1870, 1872 & 1874) and by Stur (1873), but the deposits are principally known through the publications of Velenovsky. On the Dicotyledons we have Velenovsky's papers published in 1882 A and B, and 1883. A special monograph on the Gymnosperms appeared in 1885. Further papers on the rest of the flora followed in 1886 and 1887; in 1887 A a paper appeared on the Cenomanian plants, and papers in 1888 a. 1888 B (on ferns) and 1889 complete a series of works covering the floras of numerous localities and dealing with most of the families of plants. The most noted localities are perhaps Lipenec, Raudnitz, Chlomek, Vyserovic, and Kaunic. Bayer carried on the work and published in 1893, 1896 and 1899; while Fritsch in 1877, 1883, 1889, 1893 and 1897, issued a series of papers dealing with the geology of the deposits, in the later parts of which Bayer deals with the plants. In 1901 Fritsch and Bayer published an important monograph on the Cretaceous plants of the Perucer Beds of the country, which summarises and brings together the previous work on the deposits of this age in Bohemia. In 1901 Marik also published a paper, with plates. in Bohemian.

Unger, in 1865, described a few plants from Hungary, and Staub (1888) recorded some Cenomanian plants from Nadrog. Tuzson (1908) has added an illustrated paper on the fossil flora of this region.

For Moravia, Heer (1869 a) wrote a large memoir on the Cenomanian deposits at Moletein, near the Bohemian frontier. Krasser, in 1889 and 1896, and Krasser with Kubart (1906) added to the Cretaceous flora of Moletein. The specimens are leaf-impressions, many of them dicotyledonous.

A number of Cretaceous plants from the Island of Lesina were described and illustrated by Kerner in 1896.

#### BELGIUM.

Coemans in 1867 and Briart and Cornet (1867) described the Belgian Cretaceous plants probably of the age of the Gault, Coemans dealing with a comparatively small number of plantimpressions.

#### ENGLAND.

Except for the important specimens of Bennettites from the Lower Greensand, few Cretaceous plants have been described from England. Some fragments are mentioned by Mantell (1822 & 1844), and supposed fruits from the Chalk were described in 1846, but their nature remains doubtful. Lindley and Hutton (1833-1837) figured several species, principally Gymnospermic cones, of Gault and Greensand age, and some of these have their internal anatomy petrified, though it has not yet been described. Maidstone is an important locality, the Greensand there having yielded a number of plants (see Bensted, 1862, and Mackie, 1862 B). Carruthers (1865) made known Caulopteris from the Upper Greensand, and also coniferous fruits from various Cretaceous deposits, in 1866 A, 1866 B, 1868 & 1869. The genus Cycadeoidea from the Lower Greensand was described by him in 1867, and he published a paper on Cycadean stems in 1870. Further coniferous fruits were described in 1871 and 1875. In Dixon's 'Geology of Sussex' Carruthers gave a list of the Cretaceous plants (1878), and with Gardner and others (1886) drew up the British Association Committee's report on British Secondary plants.

Williamson (1887) described a further specimen of Gymnospermic cone originally figured by Lindley and Hutton; and in 1898 Barber gave a detailed account of a Cupressinoxylon with the internal anatomy preserved from the Lower Greensand. The flora is actually much richer than these published papers would lead one to expect, as will be shown in vol. 2 of this Catalogue.

#### FRANCE.

The Cretaceous Flora in France is also rather scattered and fragmentary. Brongniart in 1849 described a few plants, and Cornuel (1866) wrote on coniferous fruits of Neocomian age, and published further studies on the subject in 1882. Crié, in 1877, 1884, 1890 & 1892, published papers dealing with the Cretaceous Flora, the most important being that of 1892.

Saporta in 1880 published on the Lower Cretaceous of Havre, and Bertrand in 1883 described a new genus of Taxinean fossil

from the Upper Cretaceous. In 1890 Marion had a short paper on the Turonian; Saporta described species of *Nelumbium* from the Uppermost Cretaceous (Danian); and Vasseur recorded a Turonian Flora near Martigues. Fliche (1892, 1893) described two Albian plants, and in 1894 had a paper on the fructifications of Cenomanian palms. In 1896 he published a large illustrated paper on the Albian and Cenomanian deposits, and in 1900 one on the Lower Cretaceous.

Lignier (1907) described several specimens of wood from Normandy, with the internal structure petrified.

#### GERMANY.

Prussia.—The deposits of Aix-la-Chapelle (or Aachen) are classical ground for the palæobotanist, and were first worked by Goeppert (1842 B). The locality, however, is generally associated with the name of Debey, and then Debey & Ettingshausen. Debey (1848 A, 1848 B, 1849, 1850) published several short papers on the Aix Cretaceous plants, and then with Ettingshausen (1859 A & B) prepared two large, well-illustrated monographs on the "Thallophyten" and the "Acrobryen" of the Cretaceous of Aix and Maestricht. Debey made large collections and was apparently preparing voluminous further publications, but in 1877 only a very short note appeared about a paper he gave on the Coniferæ of the Cretaceous of Aix. His collections with the specimens bearing unpublished names, are evidence of the richness of the deposits. In 1890 Lange also contributed to our knowledge of these beds.

The Senonian sandstones of Quedlinburg and neighbourhood have also yielded an important Flora, first noticed by Geinitz (1850 p), but more exhaustively described by Stiehler (1854, 1857, and especially 1858). Heer (1871 A) made a small contribution, and Richter has continued the work during more recent years. In 1899 B he published a paper on the Conifers of Quedlinburg, and in 1901 a monograph on the Neocomian plants of the same district. In 1905 he described numerous Senonian plants, and published a valuable revision of the genus Credneria. In 1906 he prepared a similar revision of Hausmannia, with notes on the Lower Cretaceous Flora; and in 1909 there followed an equally exhaustive monograph on Nathorstiana.

Westphalia.—This district, rich in fossil plants, has Cretaceous Floras of several successive horizons.

Roomer (1841) referred to the Cretaceous plants, but the carliest work of any note is W. von der Marck's monograph in the 'Palæontographica,' vol. xi. (1864), in which he described a number of species from the Plattenkalk. Saporta (1867) made Haldem a classical locality; and Hosius (1870) dealt with the more geological aspect of the bods of Cretaceous age in several localities. Hosius (1870 a) also described and figured a number of Dicotyledonous leaf-impressions from these deposits. Hosius and von der Marck (1880 & 1885) finally gave full and excellent accounts of the Upper and Lower Cretaceous plants of Westphalia, with good descriptions and figures, noticing a number of localities.

SILESIA.—The Quadersandstein (Upper Cretaceous) of Silesia was described by Goeppert in 1842 a and 1847. He illustrated and named plants from Kieslingswalde, Bunzlau, and clsewhere. Roemer (1889) also published an account of Senonian leaf-impressions from Bunzlau.

Saxonv.—The well-known fossil plants from the Cenomanian of Niederschoena have been described by several authors. They are often mentioned by Sternberg, 'Flora der Vorwelt' (1820–1838), some of them were noticed by Cotta (1836), and numerous plant-impressions were well described and illustrated by Geinitz (1842). The first really important work on this Flora, however, was that by Ettingshausen (1867 a), who dealt with dicotyledonous leaf-impressions; and his researches were followed by those of Engelhardt (1892 a).

The neighbourhoods of Dippoldiswalde and Dresdon are also known for Cretaceous plant-bearing deposits, and here Glocker (1841) discovered his so-called *Gyrophyllites*. Otto in his Additamenta (1852 & 1854) enumerated and gave an account of the Quader plants of this region. Geinitz (1875 A) also published a paper on the plants of the Lower Quader, with a second part on those of the Middle and Upper Quader of Saxony.

#### HOLLAND.

The Cretaceous plants of Holland are all impressions, and are similar to those of Aix. Debey (1851) studied the specimens from Maestricht; and Miquel (1853) published a monograph on

the deposits, with a number of plates and text-figures of the plants. In 1861 Bosquet enumerated a hundred species from the Limburg Chalk of Maestricht and elsewhere.

#### ITALY.

Fossil Algæ and Cycads are the principal plants described from the Cretaceous of Italy. In 1891 Bozzi wrote a paper on the Cretaceous Flora which was illustrated with two plates. The most important work is that of Capellini and Solms-Laubach (1892) dealing with the Bennettiteæ, some of which are of Cretaceous age.

#### PORTUGAL,

The Cretaceous plant's of Portugal are of special interest because among them are Dicotyledons, supposed to be the earliest to reach Europe. Neocomian or Wealden plants from Almargem and clsewhere were described by Heer (1881), Cenomanian Dicotyledons were described in 1888 by Saporta, who subsequently (1891) gave a brief account of the "most ancient European Dicotyledons" of Cercal, and in 1894 published his classic Memoir. De Lima (1901) also published a short paper on Senonian plants from this country,

#### RUSSIA.

In Eichwald's work on the fossil Flora of Russia (1853, 1860, 1861, 1862, 1865) he dealt with a number of Cretaceous plants, mostly of Neocomian age. Mercklin (1855) described petrified woods with their structure preserved, and Krendowsky (1880) described in Bussian and figured several new species of Cretaceous plants.

#### SWEDEN.

Surprisingly few fossil plants of Cretaceous age are known from this country, though the other Mesozoic deposits are very rich in such remains. Nilsson (1824) described and figured some plants from the Greensand of Scania, but did not name them fully and they have been re-named from time to time, Nathorst mentions and re-figures some of these in his works on

Swedish geology. Structurally-preserved woods, including fungal hyphæ, were described and figured by Conwentz in 1892 and further investigated by Felix (1894).

#### SWITZERLAND.

In Heer's 'Die Urwelt der Schweiz,' which first appeared in 1865, he dealt with the fossil Floras of all geological periods in Switzerland, and included an account of the Lower Cretaceous Flora of several localities. In his 'Flora fossilis Helvetiæ' (1877) he described the Neocomian plants of Berne and elsewhere, and the Upper Cretaceous plants of Freiburg and Berne. He also referred to the Flysch deposits from which Fischer-Ooster (1858) had already described the peculiar "fucoids." Though chiefly Tertiary, the lower horizons of these beds are probably of Cretaceous age.

#### MADAGASCAR.

Petrified wood from Madagascar has proved interesting and important (see Fliche, 1900 A, 1905).

#### EGYPT.

The petrified forests of Egypt were the subject of much comment even by the early writers. Among later authors, Unger (1859) and Carruthers (1870 A) may be mentioned, but the most important work was done in connection with Rohlf's expedition (in Zittel, Palæontographica, 1883), the woods being determined by Schenk. The plants are supposed to be Upper Cretaceous, and geological evidence tends to prove this for some of the horizons; but there is still doubt as to whether much of that described as Cretaceous wood is not really Tertiary. The same plant-bearing deposits extend into Nubia, where much of the wood is probably of Cretaceous age.

#### AUSTRALASIA.

The plant-bearing beds of this continent are not so well known as could be wished. Unger (1866) first mentioned Cretaceous plants from New Zealand, and Ettingshausen (1887 A) subsequently described numerous species from Upper Cretaceous

formations. A translation of the latter work appeared in New Zealand in 1891. In 1893 the same author published a preliminary essay on the Cretaceous Flora of Australia, followed by an illustrated paper in 1895; and a general account of the Cretaceous Flora of the Southern hemisphere appeared in 1896. Finally in 1896 Johnston described and figured several plants, probably of Upper Cretaceous age, from Tasmania.

#### JAPAN.

Lower Cretaceous plant-impressions from Japan were first described by Yokoyama (1889) in his paper on the Jurassic Flora, and additional species were subsequently described and figured by Nathorst (1890) and Yokoyama (1894). He pointed out the very close affinity of many of them to the Potomac plants of North America. The Japanese Cretaccous formations, however, are notable as being the only deposits of Mesozoic age which have hitherto yielded petrified masses of plants in many respects similar to the well-known Carboniferous "coal-balls." In a paper largely dealing with Tertiary specimens Reiss (1907) described a few fragments of Gymnospermic wood from these nodules; and the remains of an extensive flora, including the leading plant phyla, have been discovered in them by Stopes and Fujii (1909, 1910), Stopes (1909, 1910), Kershaw (1910), and Suzuki (1910).

#### INDIA.

Feistmantel (1877) described a tree-fern from the Cretaceous of India, but all other records of Cretaceous fossil plants from this region are doubtful.

#### CHINA.

Yokoyama (1906) records from China a few impressions of plants which are probably of Lower Cretaceous age.

#### NORTH AMERICA.

Canada.—Much work on the extensive deposits of Cretaceous plants was done by Dawson (1873–1894), who dealt principally with the numerous impressions of dicotyledonous leaves and

fragments of gymnosperms and forns, though he found and described several woods with petrified structure. Penhallow continued the investigation of the impressions, and also treated of Gymnospermic woods, but his most interesting addition to the Flora was that of Osmundites with its internal anatomy (1902 A).

United States.—The enormous extent of the Cretaceous deposits in this country, and the richness of the beds in plantimpressions, have led many workers to investigate them. The list of American publications is indeed lengthy, and instead of summarising them here, it may be better to refer to Ward's exhaustive paper (Ward, 1889, pp. 834-926) for an account of the earlier literature. Knowlton's Catalogue (1898) of the American Tertiary and Cretaceous plants brings the lists more up to date. Since this time the most active workers have been Berry (1901-1910), Knowlton (1889-1910), Hollick (1892-1910), Hollick & Jeffrey (1909), and finally Wieland, whose publications are almost confined to the Cycadophyta, which are principally from older deposits but afford results of great importance in a consideration of the Cretaceous Flora. majority of the American specimens are in the form of leafimpressions, and they occur eastwards in the clays and shales, and westwards in the great Coal-bearing series. species of petrified (silicified) wood have been described by Knowlton; but the most important plants with their internal anatomy are those with which Hollick & Jeffrey and their pupils have made the locality of Staten Island famous. These plants, preserved in the fine clay (Amboy Clay), are not exactly petrifactions in the ordinary sense, but are fragments in which the internal parts are fairly well preserved, much as they would be in peat. Dr. Berry's important monograph on the Lower Cretaceous plants of America has now appeared. Unfortunately the present work only includes literature and species appearing before the end of 1910, and as so much of the present volume was in type before Dr. Berry's work was published, it is impossible to include his results.

MEXICO.—Petrifactions of wood have been described by Felix & Nathorst from the State of Oaxaca; and Steinmann (1899) recorded and described interesting Siphonaceæ with their structure well preserved,

#### SOUTH AMERICA.

Kurtz (1902) directed attention to the existence of a Flora of the age of the "Dakota Group" in Argentina. The Neocomian flora has also received attention from Neumann (1907).

#### ARCTIC REGIONS.

The Cretaceous Floras of the Arctic are so well known through Heer's classical work (see 'Flora Fossilis Arctica,' various parts in bibliography) that it will be necessary merely to mention his papers. The Kome, Atane, and Patoot Beds of Greenland are the best known, and are most important from a geological point of view on account of the proof they afford of the great changes of climate which must have occurred in that region. They have yielded a large number of plant-impressions. principally Gymnosperms and Angiosperms, with a few characteristic Ferns. Unfortunately, however, petrified specimens are not available, although something can be done with many of the cuticles, and the material on the whole is well preserved. Nathorst has continued and amplified Heer's work, his large collections of impressions testifying to the richness of the deposits; and his description of a Cenomanian plant from Greenland (1907) forms a valuable contribution to the literature of the Cycadophyta.

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OF

# CRETACEOUS PLANTS

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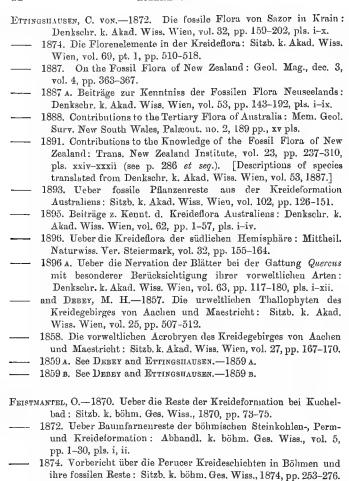
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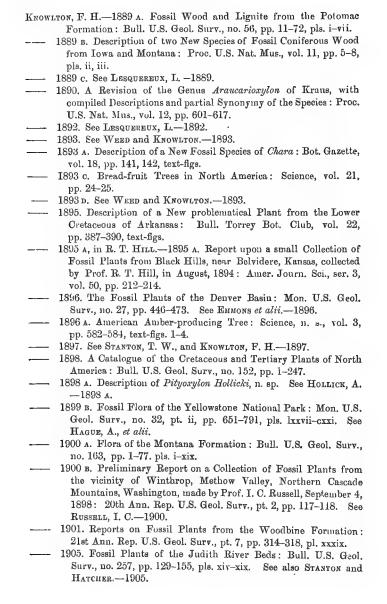
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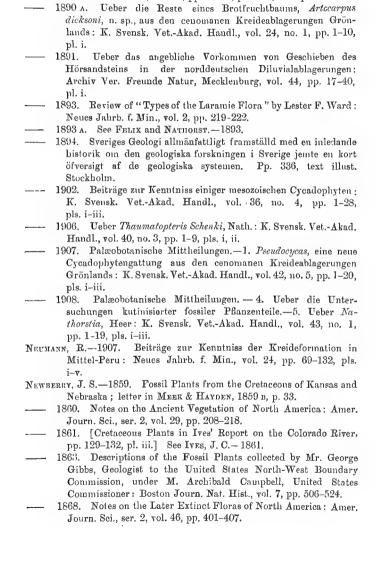
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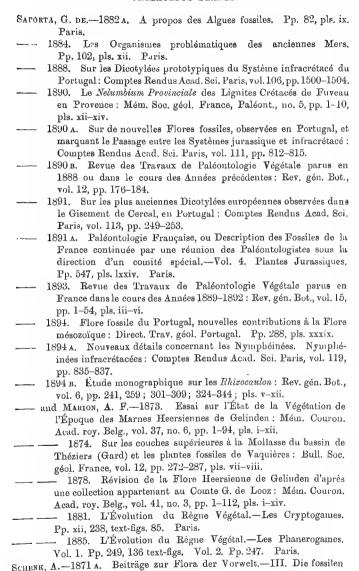
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## Note on Brongniart's "Histoire des Végétaux Fossiles" (see p. 5).

When the MS. of this Literature was completed, I followed the usual British custom, and supposed the date on the titlepage, 1828, was sufficient to quote for Brongniart's "Histoire." Since then some detailed work on the Carboniferous Flora has revealed to me that for nomenclatorial purposes this is insufficient. Mr. C. Davies Sherborn has kindly devoted his expert knowledge to the task of settling, so far as possible, the exact dates of the various parts, and has now fixed definitely three dates which even M. Zeiller's admirable bibliography \* left uncertain. In the text throughout my volume, where the book has been quoted as 1828, reference to the following list for the page quoted, will give the exact date. I believe in no case in the present volume does the difference in date prove important.

Brongniart, A.—1828–1838, "Histoire des Végétaux Fossiles" etc. Paris and Amsterdam.

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Vol. I. part 1. 1828, pp. xii, 1-80; pls. 1-9, 11, 13, 14, 16-18,
            2. 1828, pp. 81-136; pls. 9 bis, 10, 12, 15, 19-27.
          " 3. 1829, pp. 137–168; pls. 28, 30-36, 38–41, 44, 45.
             4. 1829, pp. 169-208; pls. 29, 42, 43, 46-49, 51, 52, 54-
                                         56, 61, 66,
          ,, 5. 1830, pp. 209-248; pls. 50, 53, 57, 58, 61 bis, 62, 64,
                                         65, 67, 68, 70, 71, 73, 76.
             6. 1831, pp. 249-264; pls. 59, 60, 63, 69, 72, 74, 75, 77-82.
             7. 1833, pp. 265-288; pls. 83-97.
            8. 1833, pp. 289-312; pls. 82 A, 98-109.
             9. 1834, pp. 313-336; pls. 110-114, 117, 118, 124, 127,
                                         128, 130.
         " 10. 1836, pp. 337-368; pls. 115, 116, 119-123, 125, 126,
                                         129, 131-134.
          ,, 11. 1836, pp. 369-416; pls. 135-146.
          ,, 12. 1836, pp. 417-488; pls. 37, 37 bis, 82 B, 147-160.
          "(13. 1837, pls. 161-166.
Vol. II.
         ,, 13. 1837, pp. 1-24; pls. 1, 2, 14, 15, 18.
         ,, 14. 1838, pp. 25-56; pls. 3-7, 22, 23, 26, 28, 30.
          ,, 15. 1838, pp. 57–72; pls. 8–13, 16, 17, 19–21, 24, 25,
                        Vol. II. unfinished.
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<sup>\*</sup> Zeiller, R.-1903. "Flore fossile des Gites de Charbon du Tonkin." Paris, p. 306,

## LIST OF SPECIES OF PLANTS

FROM THE

## CRETACEOUS ROCKS

DESCRIBED IN WORKS UP TO 31ST DECEMBER, 1910.

This is an alphabetical list of all the specific names originally given to plant-remains from the Cretaceous formations, with a few references to plants first described from other formations and subsequently discovered in those of Cretaceous age. It is merely a list, without any critical observations as to synonymy; but when a new name is given to a species already known, a cross-reference is added. Mere names in lists and doubtful records, such as "Pinus sp.," are not included, unless a published figure or some other special circumstance justifies this course. The date following the author's name in each case corresponds with the entry in the Bibliography (pp. 1-47), which gives the full title of the work or paper quoted. Specific names are not amended, except in the case of obvious misprints, and no species have been re-named.

The names of the European Wealden plants (other than Angiosperms) are not included in this list, except those of a few species which range to higher horizons. The Wealden Flora has already been described by Prof. Seward in two earlier volumes of this series of Catalogues.

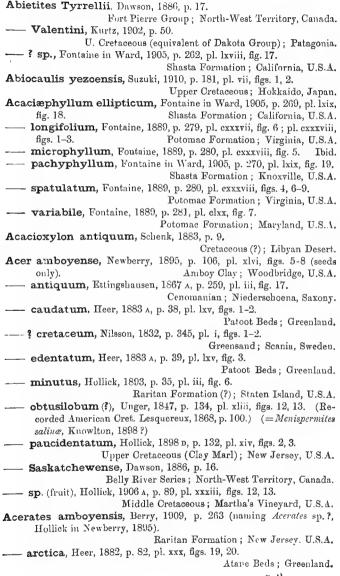
- Aachencsaurus multidens, Smets in Dollo, 1888, p. 300. (= Aachenoxylon, Hovelacque, 1890, and Nicolia Moresneti, Hovelacque, 1890.)
- Aachenoxylon, Hovelacque, 1890, p. 60, text-fig. 1, pl. iii, fig. 1. (= Aachenosaurus multidens, Smets, in part.)
- Upper Cretaceous; Moresnet. **Abies Benstedi**, Mantell, 1843, p. 34; & 1846 (1843), p. 52, pl. ii, figs. 2, a, b, c; (& 1844, p. 166, pl. v, figs. 2, 2 a, 2 b, wood of same).
- Lower Greensand; Maidstone.

  Briarti (Coemans), Schimper, 1872, p. 307. Cretaceous; Belgium.
- ---- calcaria, Velenovsky, 1885, p. 33, pl. v, fig. 1, pl. vi, fig. 17.

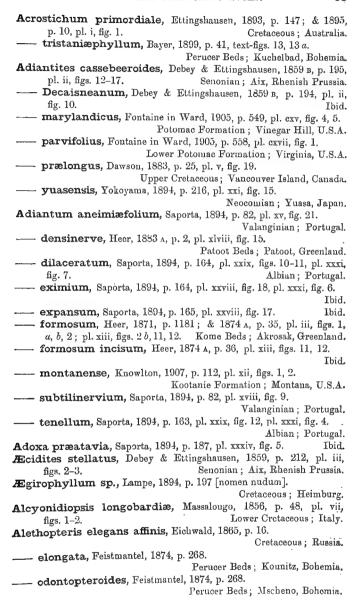
  Cenomanian; Bohemia,
- ---- chuchlensis, Velenovsky, 1885, p. 34, pl. v, figs. 11-13.

  Perucer Beds; Bohemia.

Abies Linkii, Roewer, 1839, p. 10, pl. xvii, fig. 2. (= Abietites Linkii (Roem.), Dunker, 1846. Recorded American Trinity div. by Fon-Oolithen-gebirges; Northern Germany. taine, 1894.) --- minor, Velenovsky, 1885, p. 33, pl. v, figs. 14, 15, pl. viii, fig. 1. Cenomanian; Bohemia. - oblonga, Lindley & Hutton, 1835, p. 175, pl. cxxxvii. (= Abietites oblongus, Goeppert, and Pinites oblongus, Williamson, 1887.) Greensand; Dorsetshire. - oblongata, Buckland in Bensted, 1862, p. 337. (= Abies oblonga in Lindley & Hutton.) Greensand; Dorsetshire. — (Picea?) Omalii (Coemans), Schimper, 1872, p. 307. (= Pinus Cretaceous; Belgium. Omalii, Coemans, 1867.) — Valentini, Kurtz, 1902, p. 58. U. Cretaceous (" Dakota Beds"); Patagonia. Abietites acicularis, Saporta, 1890 A, p. 814; & 1894, p. 92, pl. xvii, Valanginian; Portugal. figs. 1, 2. ---- angusticarpus, Fontaine, 1889, p. 263, pl. exxxiii, fig. 1. Potomac Formation; Virginia, U.S.A. --- Benstedi (Mantell), Goeppert. (= Abies Benstedi, Mantell, 1846.) Lower Greensand; Maidstone. - californicus, Fontaine in Diller & Stanton, 1894, p. 450 [nomen Horsetown Beds; California, U.S.A. nudum]. --- Chevalieri, Fliche, 1896, p. 207, pl. ix, fig. 1. Albian; Clermont, France. --- cretacea, Newberry, 1898, p. 18, pl. xiv, fig. 5. Dakota Group; Dakota, U.S.A. —— curvifolius, Dunker, 1856, p. 18, pl. xxxiii, fig. 1. Quadersandstein; Blankenburg, Saxony. - ellipticus, Fontaine, 1889, p. 263, pl. cxxxii, figs. 8, 9, pl. cxxxiii, figs. 2-4, pl. elxviii, fig. 8. Potomac Formation; Virginia, U.S.A. --- Ernestinæ (Stiehler), Lesquereux, 1874, p. 49, pl. i, fig. 7. (= Pterophyllum Haydenii, Lesquereux, in part.) Dakota Group; Nebraska, U.S.A. - Glueckii, Richter, 1905, p. 7, pl. i, fig. 14. Upper Cretaceous; Blankenburg. - Gcepperti, Dunker, 1856, p. 180, pl. xxxii. - Hartigi, Dunker, 1856, p. 180, pl. xxxiii, fig. 2. (= Araucarites Hartigi, Schimper, 1872.) Ibid. — **Linkii** (Roemer), Dunker, 1846, p. 18, pl. ix. figs. 11 a-e. (= Abies Linkii, Roemer, 1839.) (Recorded U.S.A. by Fontaine, 1894.) Wealden; North Germany. - macrccarpus, Fontaine, 1889, p. 262, pl. exxxii, fig. 7. Potomac Formation; Virginia, U.S.A. --- marylandicus, Fontaine in Ward, 1905, p. 549, pl. cxv, figs. 4, 5. Older Potomac Formation; Maryland, U.S.A. - oblongus, Goeppert, 1850, p. 207. (= Abies oblonga, Lindley & Hutton, 1835.) --- truncatus, Saporta, 1867, p. 34.— Quadersandstein; Westphalia.



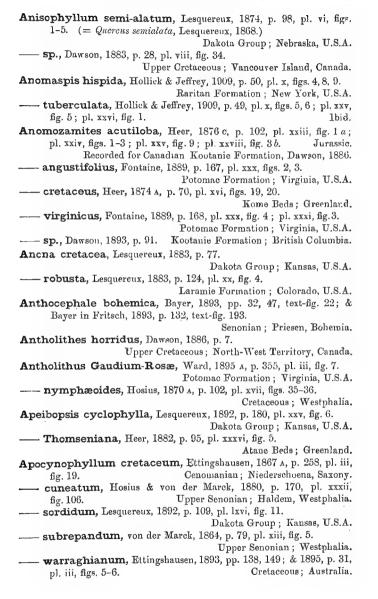
Acerates sp.?, Hollick in Newberry, 1895, p. 124, pl. xxxii, fig. 17; pl. xli, figs. 4, 5. (Named Acerates amboyensis, Berry, 1909.)  Amboy Clays; New Jersey, U.S.A.
Aceriphyllum aralicides, Fontaine, 1889, p. 321, pl. clxiii, fig. 8.  Potomac Formation; Virginia, U.S.A.
Acerites? cretaceus (Nilsson), Brongniari, 1849 A. p. 111. Cretaceous; Scania, Sweden.
— menispermifolius, Lesquereux, 1868, p. 101. (= Menispermites acerifolia, Lesquereux, 1874.) Dakota Group; Nebraska, U.S.A.
- multiformis, Lesquereux, 1892, p. 156, pl. xxxiv, figs. 1-9.  Dakota Group; Kansas, U.S.A.
pristinus, Newberry, 1870, p. 15; & 1878, pl. v, fig. 4.  Dakota Group; Nebraska, U.S.A.
styracifolius, Unger, 1850 A, p. 453 [not specifically named by Reuss, 1846, p. 96, pl. li, figs. 4, 5].
Cenomanian (Pläner); Bohemia.
Acrostichites Egedeanus, Heer, 1874 a, p. 39, pl. iii, figs. 5, 5 b.  Kome Beds; Arkrusak, Greenland.
Acrostichophyllum cretaceum, Velenovsky, 1889, p. 28, pl. ii, figs. 22, 23.  Cenomanian; Vyserovic, Bohemia.
Acrostichopteris adiantifolia (Fontaine), Berry, 1910 p, p. 629. (= Baieropsis adiantifolia, Fontaine, 1889.)
Potomac Formation, &c. Virginia, U.S.A.
- cyclopteroides, Fontaine, 1889, p. 109, pl. xciv, fig. 8. Ibid.
— densifolia, Fontaine, 1889, p. 107, pl. xciv, fig. 4, pl. clxx, fig. 11, pl. clxxi, figs. 2, 6, pl. clxxii, fig. 13.
Potomac Formation; Maryland, U.S.A.
fimbriata, Knowlton, 1907, p. 110, pl. xi, figs. 3, 3 A.
Kootanie Formation; Montana, U.S.A.
— longipennis, Fontaine, 1889, p. 107, pl. clxx, fig. 10, pl. clxxi,
figs. 1, 5, 7. Potomac Formation; Maryland, U.S.A.
— parcelobata, Fontaine, 1889, p. 108, pl. xeiv, figs. 6, 7, 11, 14.
Potomac Formation; Virginia, U.S.A.
— parvifolia, Fontaine, 1889, p. 108, pl. xciv, figs. 5, 9, 10, 12,
pl. clxxi, figs. 3, 4, pl. clxxii, fig. 14.
Potomac Formation; Maryland and Virginia, U.S.A.
— pluripartita (Fontaine), Berry, 1910 p (re-naming Baieropsis pluri-
partita, B. pluripartita minor, and B. longifolia of Fontaine, 1889).
Potomac Formation, etc.; Virginia, U.S.A.
Acrestichum crassifolium, Fontaine, 1889, p. 105, pl. xvi, fig. 7.
Potomac Formation; Virginia, U.S.A.
- cretaceum, Velenovsky, 1889, p. 5, pl. ii, figs. 22, 23.
Cenomanian; Vyserovic, Bohemia.
Haddeni, Hollick, 1902, p. 146, pl. iv, figs. 3-6.



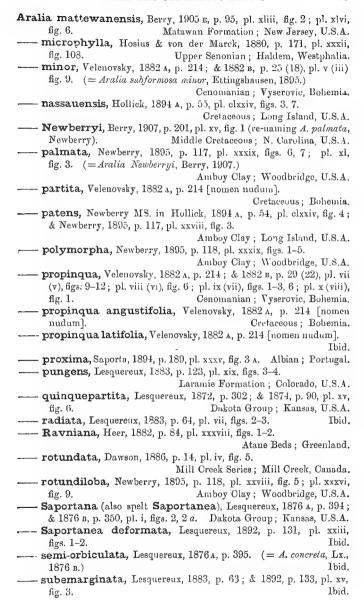
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Alethopteris Reichiana (Brongniart), Presl in Sternberg, 1838, p. 146.
      (= Pecopteris Reichiana, Brougniart, 1828.)
                                   Cenomanian; Niederschoenn, Saxony.
--- recentior, Ettingshausen, 1852 c, p. 16, pl. iii, figs. 17, 18.
                                                     Wernsdorfer Beds.
-- revoluta, Schulze, 1888, p. 10 [nomen nudum].
                                                Neocomian; Helmstein.
Aleurites eccenica, Lesquereux, 1873, p. 397.
                                 Laramie Formation; Wyoming, U.S.A.
Alisma? reticulata, Heer, 1882, p. 59, pl. xv, fig. 1.
                                               Atane Beds; Greenland.
Alismacites dakotensis, Lesquereux, 1892, p. 37, pl. ii, fig. 10.
                                        Dakota Group; Kansas, U.S.A.
--- primævus, Saporta, 1894, p. 96, pl. xv, fig. 31, pl. xvi, fig. 13 a.
                                                Valanginian; Portugal.
primigenius, Saporta, 1890 A, p. 814.
                                                                  Ibid.
Alnites crassus, Lesquereux, 1895, p. 13, pl. B, fig. 4.
                                     Dakota Group; Minnesota, U.S.A.
- ? Friesii (Nilsson), Brongniart, 1849 A, p. 111.
                                           Cretaceous; Scania, Sweden.
--- grandifolia, Newberry, 1870, p. 9; & 1878, pl. iv, fig. 2; & 1898,
                                      Dakota Group; Nebraska, U.S.A.
      p. 67, pl. iv, fig. 2.
 ---- insignis, Dawson, 1883, p. 28, pl. viii, fig. 38.
                          Upper Cretaceous; Vancouver Island. Canada.
— petiolatus, Lesquereux, 1878, p. 10 [nomen nudum].
    - quadrangularis, Lesquereux, 1874, p. 62, pl. iv, fig. 1. (=Hama-
      melites quadrangularis, Lesquereux, 1876, and Populites quadrangu-
      laris, Lesquereux, 1868.)
                                       Dakota Group: Kansas, U.S.A.
- speciosus, Eichwald, 1865, p. 58, pl. iii, fig. 15.
                                                   Cretaceous; Russia.
Alnus? Friesii, Nilsson, 1832, p. 346, pl. i, fig. 7. Greensand; Sweden.
Alnus grandifolia, Newberry, in Raynolds, 1869, p. 164 [nomen nudum].
                                                      Nebraska, U.S.A.
-- Grewiopsis, Ward, 1887, p. 30, pl. xiv, fig 1.
                                 Laramie Formation; Wyoming, U.S.A.
   kanseana, Lesquereux, 1874, p. 62, pl. xxx, fig. 8. (= Hamamelites
      Kansaseana, 1876, and H. Kansaseanus, 1883, re-named Quercus
      Kanseana by Knowlton, 1898.)
                                        Dakota Group; Kansas, U.S.A.
  — protogæa, Heer, 1883 A, p. 22, pl. lv, fig. 10.
                                              Patoot Beds; Greenland.
--- ? sp., Roemer, 1889, p. 144, pl. xii, figs. 7-8.
                                            Senonian; Bunzlau, Silesia,
Alsophilina kauniciana, Dormitzer in Krejiei, 1853, p. 28, pl. i.
      (= Oncopteris Kauniciana (Dorm. sp.) Velenovsky, 1888.)
                                      Perucer Beds; Kaunitz, Bohemia.
Amelanchier Whitei, Hollick, 1906 A, p. 83, pl. xxxii, fig. 1.
                         Middle Cretaceous; Martha's Vineyard, U.S.A.
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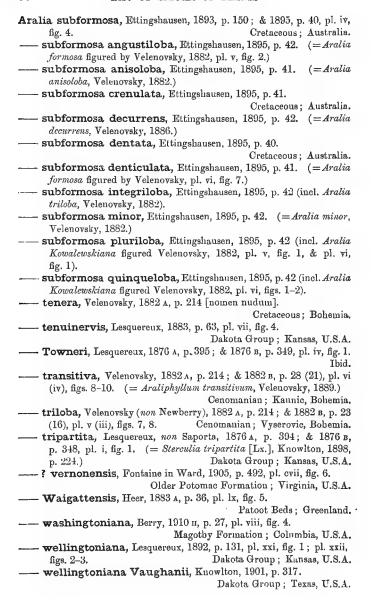
Ampelophyllum attenuatum, Lesquereux, 1876 A, p. 396; & 1876 B,
p. 354, pl. ii, fig. 3. Dakota Group; Kansas, U.S.A.
firmum, Lesquereux, 1876 A, p. 396.
—— ovatum, Lesquereux, 1876 B, p. 355; & 1883, p. 69. (= Populites
ovata, Lesquereux, 1868, and Celtis? ovata, Lesquereux, 1874.)
Dakota Group; Nebraska, U.S.A.
Amphibennet(t)ites Bleicheri, Fliche, 1896, p. 163, pl. xiv, fig. 1;
pl. v, fig. 2, text-fig. 3. Albian; Revigny, France.
<b>Renaulti,</b> Fliche, 1895, p. 167, pl. v, fig. 3, text-fig. 4.
Albian; Ardennes, France.
Amphibryophyllum carinatum, Debey in Mourlon, 1881, p. 133
[romen nudum]. Cenomanian; Limbourg, Belgium.
— plicatum, Debey in Mourlon, 1881, p. 133 [nomen nudum]. Ibid.
verticillatum, Debey in Mourlon, 1881, p. 133 [nomen nudum].
Ibid.
Amygdalus taurica, Eichwald, 1865, p. 67, pl. iii, fig. 22.
Neocomian; Russia.
Anacardites amissus, Heer, 1882, p. 99, pl. xl, fig. 8.
Atane Beds; Greenland.
— antiquus, Lesquereux, 1892, p. 156, pl. lvii, fig. 1.
Dakota Group; Kansas, U.S.A.
Andromeda acuminata, Lesquereux, 1876 A, p. 593. Ibid.
—— affinis, Lesquereux, 1876 в, р. 348, рl. iii, figs. 5, 5 а.
Laramie Formation; Montana, U.S.A.
fig. 23. Cretaceous; Australia.
Cookii (Newberry), Berry, 1909, p. 261 (re-naming Andromeda
flexuosa, Newberry, 1896). Raritan Formation; New Jersey, U.S.A.
cretacea, Lesquereux, 1892, p. 117, pl. xvii, figs. 17, 18, pl. xxiv,
fig. 5. Dakota Group: Kansas, U.S.A.
flexuosa, Newberry, 1895, p. 121, pl. xxxiv, figs. 1-5. (Re-named
Andromeda Cookii by Berry in 1909.)
Amboy Clay; Woodbridge, U.S.A.
grandifolia, Berry, 1907, p. 204, pl. xv, fig. 3 (re-naming Andromeda
latifolia, Newberry, 1895).
Middle Cretacecus; North Carolina, U.S.A.
— latifolia, Newberry, 1895, p. 120, pl. xxxiii, figs. 6-10; pl. xxxiv,
figs. 6-11; pl. xxxvi, fig. 10. (= Andromeda grandifolia, Berry,
1907.) Amboy Clay; Woodbridge, U.S.A.
—— linifolia, Lesquereux, 1892, p. 118, pl. lii, fig. 5.
Dakota Group; Kansas, U.S.A.
— novæ-cæsareæ, Hollick in Newberry, 1895, p. 121, pl. xlii, figs.
9-12, 28-31. Amboy Clay; New Jersey, U.S.A.
— Parlatorii, Heer in Capellini & Heer, 1867, p. 18, pl. i, fig. 5.  Dakota Group; Nebraska, U.S.A.
Parlatorii longifolia, Lesquereux, 1892, p. 116, pl. lxiv, fig. 19.
Dakota Group: Kansas U.S.A

Andromeda Pfaffiana, Heer, 1882, p. 79, pl. xxv, fig. 6; pl. xxxviii,
figs. 5-7; pl. xliv, fig. 12. Atane Beds; Greenland.
Dakota Group; Kansas, U.S.A.
— tenuinervis, Lesquereux, 1892, p. 116, pl. xxxviii, fig. 7. Ibid.
— Wardiana, Lesquereux, 1892, p. 119, pl. lxiv, fig. 17. Ibid.
- sp., Heer, 1874 A, p. 135, pl. xxvi, fig. 6 b. Cretaceous; Greenland.
Androvettia carolinensis, Berry, 1910 A, p. 183, pl. xix, figs. 1-6.
Middle Cretaceous; North Carolina, U.S.A.
statenensis, Hellick & Jeffrey, 1909, p. 22, pl. iii, figs. 1-5; pl. vii,
figs. 1-8; pl. viii, figs. 1-12; pl. xxviii, figs. 5-8; pl. xxix, figs. 1-6.
Raritan Formation; Staten Island, U.S.A.
Aneimia perplexa, Hollick in Newberry, 1898, p. 3, pl. xv, figs. 1, 1 a;
pl. xvi, fig. 3; pl. lxiii, figs. 1-4 (re-naming Sphenopteris elongatum,
Newberry, 1863). Laramie Formation; Orcas Island, U.S.A.
robusta, Hollick, 1902, p. 145, pl. iii, fig. 1.
Laramie Formation; Colorado, U.S.A.
stricta, Newberry, 1895, p. 38, pl. iii, figs. 1, 2.
Amboy Clay; New Jersey, U.S.A.
supercretacea, Hollick, 1902, p. 145, pl. iii, figs. 6, 7.
Laramie Formation; Colorado, U.S.A.
Aneimidium lobulatum, Saporta, 1894, p. 129, pl. xxvi, fig. 23.
Urgonian; Portugal,
minutulum, Saporta, 1894, p. 130, pl. xxvi, fig. 13. Ibid.
Schimperi, Heer, 1874 A, p. 36, pl. ii, fig. 19; pl. xv, fig. 5 c.
Kome Beds; Greenland.
— tenerum, Saporta, 1894, p. 130, pl. xxvi, fig. 25.
Urgonian; Portugal.
sp., Heer, 1874, p. 133, pl. xvi, fig. 3 α. Cretaceous; Greenland.
Angiopteridium auriculatum, Fontaine, 1889, p. 113, pl. vii, figs.
8-11; pl. xxviii, fig. 1. (Re-named Berry 1910 D. Tæniopteris
auriculatum.) Potomac Formation: Virginia II S A
- canmorense, Dawson, 1893, p. 83, text-fig. 2.
Kootanie Formation; North-West Territory, Canada.
— densinerve, Fontaine, 1889, p. 115, pl. xxix, fig. 4.
Potomac Formation; Virginia, U.S.A.
— dentatum, Fontaine, 1889, p. 117, pl. xxx, figs. 6, 7. lbid.
ellipticum, Fontaine, 1889, p. 114, pl. xxix, fig. 3.
nervosum, Fontaine, 1889, p. 114, pl. xxix, fig. 2. (Re-named,
Berry 1910 D, Taniopteris nervosum.)
oregonense, Fontaine in Stanton, 1895, p. 22 [nomen nudum].
Horsetown Beds; Oregon, U.S.A.
— cvatum, Fontaine, 1889, p. 115, pl. xxix, figs. 6, 7.
Potomae Formation; Virginia, U.S.A.
pachyphyllum, Fontaine, 1889, p. 115, pl. xxix, fig. 5. Ibid.
strictinerve, Fontaine, 1889, p. 116, pl. xxix, figs. 8, 9.
figs. 1, 5.



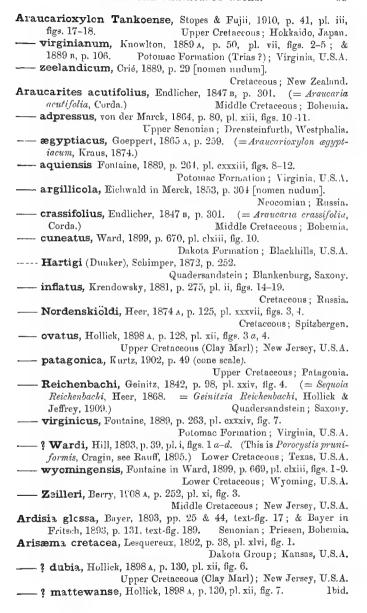
Aralia anisoloba, Velenovsky, 1882 A, p. 214; & 1882 B, p. 22 (15), pl. v (iii), figs. 4-6. (= Araliphyllum anisolobum, Velenovsky, 1889, and Aralia subformosa anisoloba, Ettingshausen, 1895.) Cenomanian; Bohemia. --- berberidifolia, Lesquereux, 1892, p. 135, pl. xvi, fig. 11. Dakota Group ; Kansas, U.S.A. Brittoniana, Berry, 1905 E, p. 96, pl. xlv, fig. 3. Matawan Formation; New Jersey, U.S.A. - calomorpha, Saporta, 1894, p. 188, pl. xxxiv, figs. 15-16; pl. xxxv, Albian; Portugal. fig. 1, 2, 4. - Chlomekensis, Velenovsky, 1882 A, p. 214 [nomen nudum]. Cretaceous; Bohemia. --- Chlomekiana, Velenovsky, 1882 B, p. 20 (13), pl. v (iii), fig. 3. Cenomanian; Bohemia. --- concreta, Lesquereux, 1876 л, р. 394; & 1876 в, р. 349, pl. iv, figs. 2-4. (=A. semiorbiculata, Lx.) Dakota Group; Kansas, U.S.A. --- coriacea, Velenovsky, 1886, p. 11 (58), pl. i (xvi), figs. 1-9; pl. ii (xvii), fig. 2. Cenomanian; Bohemia. — Credneriæfolia, Velenovsky, 1882 A, p. 214 [nomen nudum]. Cretaceous; Bohemia. -- Daphnophyllum, Velenovsky, 1882 A, p. 214; & 1882 B, p. 30 (23), pl. vii (v), figs. 5, 6, 7, 8, 10; pl. viii (vi), figs. 1-5. Cenomanian; Bohemia. decurrens, Velenovsky, 1886, p. 11 (51), pl. iv (xix), figs. 5-7. (=Aralia subformosa decurrens, Ettingshausen, 1895.) - denticulata, Hosius & von der Marck, 1880, p. 170, pl. xxxii, figs. 107, 107 A. Upper Senonian; Haldem, Westphalia. - (Panax) dentifera, Velenovsky, 1886, p. 13 (60), pl. ii (xvii), Cenomanian; Bohemia. figs. 3-5. -- dubia, Fontaine, 1889, p. 314, pl. clvii, figs. 1-7. (= Aralia Fontainei, Knowlton, 1898.) Potomac Formation; Virginia, U.S.A. - elegans, Velenovsky, 1886, p. 13 (60), pl. iv (xix), fig. 1. (= Aralia furcata, Vel.) Cenomanian; Vyserovic, Bohemia. Fontainei, Knowlton, 1898, p. 37 (re-naming A. dubia, Fontaine). Potomac Formation; Virginia, U.S.A. — formosa, Heer, 1869 A, p. 18, pl. viii, fig. 3. (= Araliphyllum formosum (Heer) Velenovsky, 1889.) Upper Cretaceous; Moletein, Moravia. - furcata, Velenovsky, in Fritsch & Bayer, 1901, p. 152. (= Araliphyllum furcatum, Velenovsky.) Perucer Beds; Bohemia. - grœnlandica, Heer, 1882, p. 84, pl. xxxviii, fig. 3; pl. xxxix, fig. 1; pl. xlvi, figs. 16-17. Atane Beds; Greenland. - Kowalewskiana, Saporta & Marion, 1878, p. 12. (= Araliphyllum Kowalewskianum in Velenovsky, 1889.) Cenomanian; Bohemia. — Masoni, Lesquereux, 1892, p. 133, pl. xv, fig. 4. Dakota Group ; Kansas, U.S.A.





Aralia Westonii, Dawson, 1886, p. 14, pl. iv, fig. 6.
Mill Creek Series; Mill Creek, Canada
— Wiesneri, Krasser & Kubart, 1906, p. 47 [nomen nudum].
Cretaceous; Moletein, Moravia.
Oretaceous; Kunstadt, Moravia.
Araliæphyllum aceroides, Fontaine, 1889, p. 319, pl. clvi, fig. 11;
pl. clxii, fig. 2. Potomac Formation; Virginia, U.S.A.
acutilobum, Fontaine, 1889, p. 318, pl. clxiii, fig. 2. Ibid.
haldemianum, Debey, MS., in Saporta, 1873, p. 60, pl. vii,
figs. 1, 2. Upper Senonian; Haldem, Westphalia.
- magnifolium, Fontaine, 1889, p. 318, pl. clix, figs. 9, 10.
Potomac Formation; Virginia, U.S.A.
obtusilobum, Fontaine, 1889, p. 317, pl. clxiii, figs. 1, 4; pl. clxiv,
fig. 3. Ibid.
Araliphyllum anisclobum, Velenovsky, 1889, pp. 47, 50, 54.
(= Aralia anisoloba, Velenovsky, 1882.) Cenomanian; Bohemia.
formosum (Heer), Velenovsky; 1889, pp. 50, 54, 59. (= Aralia
formosa, Heer, 1869.)
Kowalewskianum, Velenovsky, 1889, pp. 50, 54, 57. (= Aralia
Kowalewskiana, Saporta & Marion, 1878.) Ibid.
transitivum, Velenovsky, 1889, p. 119. (= Aralia transitiva,
Velenovsky.) Ibid.
Araucaria acutifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, figs. 13-
15. Albian; Luschitz, Bohemia.
— bladenensis, Berry, 1908 A, p. 255, pl. xii; pl. xiii; pl. xiv, figs. 1-3.
Middle Cretaceous; N. Carolina, U.S.A.
Middle Cretaceous; N. Carolina, U.S.A. bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20–24.  Cenomanian; Lipenec, Bohemia.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; &
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3.  Senonian; Priesen, Bohemia.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3.  Senonian; Priesen, Bohemia,  — Clarkii, Berry, 1910 A, p. 182.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia,  — Clarkii, Berry, 1910 A, p. 182.  Middle Cretaceous; North Carolina, U.S.A.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 A, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  — Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 A, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  Albian; Luschitz, Bohemia.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  — Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 A, p. 182.  — Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  — Albian; Luschitz, Bohemia.  — cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  — Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 a, p. 182.  — Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  — Albian; Luschitz, Bohemia.  — cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  — Greensand; France.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  — Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 a, p. 182.  — Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  — Albian; Luschitz, Bohemia.  — cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  — Greensand; France.  — epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893,
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  — Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 A, p. 182.  — Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  — Albian; Luschitz, Bohemia.  — cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  — Greensand; France.  — epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2.  Senonian; Priesen, Bohemia.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  — Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 A, p. 182.  — Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  — Albian; Luschitz, Bohemia.  — cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  — Greensand; France.  — epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2. Senonian; Priesen, Bohemia.  — Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  — Clarkii, Berry, 1910 A, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  Albian; Luschitz, Bohemia.  — cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  Greensand; France.  — epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2. Senonian; Priesen, Bohemia.  — Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.  Priesener Beds; Priesen, Bohemia.
Middle Cretaceous; N. Carolina, U.S.A.  — bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  — Cenomanian; Lipenec, Bohemia.  — brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3.  — Clarkii, Berry, 1910 A, p. 182.  — Middle Cretaceous; North Carolina, U.S.A.  — crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  — Albian; Luschitz, Bohemia.  — cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  — Greensand; France.  — epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2.  — Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.  — Priesener Beds; Priesen, Bohemia.  — Hatcheri, Wieland, 1910, p. 80, fig. 2 on plate. Wyoming, U.S.A.
Middle Cretaceous; N. Carolina, U.S.A.  bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3.  Clarkii, Berry, 1910 a, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  Albian; Luschitz, Bohemia.  cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  Greensand; France.  epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2.  Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.  Priesener Beds; Priesen, Bohemia.  Hatcheri, Wieland, 1910, p. 80, fig. 2 on plate. Wyoming, U.S.A.  hespera, Wieland, 1910, p. 78, fig. 1 on plate, & pl. xxii.
Middle Cretaceous; N. Carolina, U.S.A.  bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  Clarkii, Berry, 1910 A, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  Albian; Luschitz, Bohemia.  cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  Greensand; France.  epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2. Senonian; Priesen, Bohemia.  Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.  Priesener Beds; Priesen, Bohemia.  Hatcheri, Wieland, 1910, p. 80, fig. 2 on plate. Wyoming, U.S.A.  hespera, Wieland, 1910, p. 78, fig. 1 on plate, & pl. xxii.  S. Dakota, U.S.A.
Middle Cretaceous; N. Carolina, U.S.A.  bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  Clarkii, Berry, 1910 a, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  Albian; Luschitz, Bohemia.  cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  Greensand; France.  epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2. Senonian; Priesen, Bohemia.  Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.  Priesener Beds; Priesen, Bohemia.  Hatcheri, Wieland, 1910, p. 80, fig. 2 on plate. Wyoming, U.S.A.  hespera, Wieland, 1910, p. 78, fig. 1 on plate, & pl. xxii.  S. Dakota, U.S.A.  insulinensis, Fliche, 1896, p. 177, pl. v, fig. 5, text-fig. 5.
Middle Cretaceous; N. Carolina, U.S.A.  bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3.  Clarkii, Berry, 1910 a, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  Albian; Luschitz, Bohemia.  cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  Greensand; France.  epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2.  Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.  Priesener Beds; Priesen, Bohemia.  Hatcheri, Wieland, 1910, p. 80, fig. 2 on plate. Wyoming, U.S.A.  hespera, Wieland, 1910, p. 78, fig. 1 on plate, & pl. xxii.  S. Dakota, U.S.A.  insulinensis, Fliche, 1896, p. 177, pl. v, fig. 5, text-fig. 5.  Albian; Islettes, France.
Middle Cretaceous; N. Carolina, U.S.A.  bohemica, Velenovsky, 1889, p. 8, pl. i, figs. 20-24.  Cenomanian; Lipenec, Bohemia.  brachyphylla, Bayer in Fritsch, 1894, p. 129, text-fig. 178; & Bayer, 1893, pp. 5, 36, fig. 3. Senonian; Priesen, Bohemia.  Clarkii, Berry, 1910 a, p. 182.  Middle Cretaceous; North Carolina, U.S.A.  crassifolia, Corda in Reuss, 1846, p. 94, pl. xlviii, fig. 12.  Albian; Luschitz, Bohemia.  cretacea (Brongniart), Saporta in Schimper, 1872, p. 255.  Greensand; France.  epactridifolia, Bayer in Fritsch, 1893, p. 24; & Bayer, 1893, pp. 4, 36, fig. 2. Senonian; Priesen, Bohemia.  Frici, Velenovsky in Fritsch, 1893, p. 128, text-fig. 177.  Priesener Beds; Priesen, Bohemia.  Hatcheri, Wieland, 1910, p. 80, fig. 2 on plate. Wyoming, U.S.A.  hespera, Wieland, 1910, p. 78, fig. 1 on plate, & pl. xxii.  S. Dakota, U.S.A.  insulinensis, Fliche, 1896, p. 177, pl. v, fig. 5, text-fig. 5.

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Araucaria latifolia, Bozzi, non Feistmantel, in Tommasi, 1892, p. 1119
       [nomen nudum].
                                                    Senonian (?); Italy.
    - macrophylla, Bozzi, 1891, p. 375, pl. xvi, figs. 1-2.
                                         Cretaceous (?); Vernasso, Italy.
- Miqueli, Debey, 1877, p. 110 [nomen nudum].
                                        Senonian; Aix, Rhenish Prussia.
--- obtusifolia, Fontaine, 1889, p. 249, pl. lxxxv, fig. 13.
                                  Potomac Formation; Virginia, U.S.A.
-- podocarpoides, Fontaine, 1889, p. 249, pl. lxxxvi, fig. 4.
                                                                  Ibid.
-- reperta, Fliche, 1896, p. 174, pl. vi, fig. 2.
                                             Albian; Clermont, France.
-- revigniacensis, Fliche, 1896, p. 176, pl. v, fig. 4.
                                               Albian; Revigny, France.
--- spatulata, Newberry, 1868, p. 10; & 1878, pl. ii, figs. 5, 5 a.
                                       Dakota Group; Nebraska, U.S.A.
---- Toucasi, Saporta, 1879, p. 198, text-fig. 272.
                                             Turonian; Toulon, France.
— vernassiensis, Bozzi in Tommasi, 1892, p. 1120 [nomen nudum].
                                                    Senonian (?); Italy.
---- zamioides, Fontaine, 1889, p. 250, pl. cxxi, figs. 1-1 a.
                                  Potomac Formation; Virginia, U.S.A.
? — sp., Jeffrey, 1906, p. 388, pl. xxviii, figs. 14, 15.
                                  Middle Cretaceous; New York, U.S.A.
Araucariocaulen breveradiatum, Lignier, 1907, p. 290, pl. xix,
       figs. 33-43; pl. xxi, fig. 67, diagr. 10; pl. xxii, figs. 75-78; pl. xxiii.
       figs. 79-81; text-fig. 2, p. 283.
                                         Cenomanian; Dives, France.
Araucariophloios breveradiatum, Lignier, 1907, p. 291.
Araucariopitys americana, Jeffrey, 1907, p. 435, pls. xxviii-xxx.
                              Middle Cretaceous; Staten Island, U.S.A.
Araucarioxylon ægyptiacum, Kraus in Schimper, 1874, p. 383; &
       in Schenk, 1883, p. 3, pl. i, figs. 1-2; pl. ii, fig. 3. (= Dadoxylon
       agyptiacum, Unger, 1858.)
                        Cenomanian or Lower Turonian; Libyan Desert.
— albianum, Fliche, 1896 A, p. 182, pl. iv, figs. 2-4.
                                                 Albian : Aube, France.
— armeniacum, Gürich, 1885, p. 433.
                                            Cretaceous; Transcaucasia.
— barremianum, Fliche, 1900, p. 26, pl. ii, figs. 2-4.
                                      Lower Cretaceous; Vassy, France.
—- Gardoniense, Crié, 1890, p. 235, pl. i, figs. 1-4.
                                       Cenomanian; Ile de Aix, France.
--- Hoppertcnæ, Knowlton in Ward, 1899, p. 644, pls. clxiii-clix.
                                      Daketa Group; S. Dakota, U.S.A.
--- madagascariense, Fliche, 1900 A, p. 472, text-fig. 1.
                                                Senonian; Madagascar.
--- noveboracense, Hollick & Jeffrey, 1909, p. 58, pl. xxi, figs. 1-3,
                              Raritan Formation; Staten Island, U.S.A.
- Prosseri, Penhallow, 1900, p. 77.
                                 Comanche Cretaceous; Kansas, U.S.A.
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Aristolochia Daveauana, Saporta, 1894, p. 183, pl. xxxv, fig. 10.
Albian; Portugal.
tecomæcarpa, Bayer, 1899, p. 29, pl. i, figs. 7, 8, text-figs. 10, 10 α.
Perucer Beds; Vyserovic, Bohemia.
Aristolcchiæphyllum (?) cellulare, Ward, 1905, p. 492, pl. cviii,
fig. 5. Potomac Formation; Virginia, U.S.A.
Aristolochites dentata, Heer in Capellini & Heer, 1867, p. 18, pl. ii,
figs. 1, 2. Dakota Group; Nebraska, U.S.A.
2
— infundibuliformis, Lesquereux, 1876 A, p. 393.
Dakota Group; Kansas, U.S.A.
Aristoloiæphyllum crassinerve, Fontaine, 1889, p. 322, pl. clx,
figs. 3-6. Potomac Formation; Virginia, U.S.A.
Arthropitys mirabilis, Eichwald, 1865, p. 32, pl. v, fig. 9.
Cretaceous; Russia.
Arthrotaxis sp., Nathorst, 1891, p. 34, pl. i, figs. 12-14.
Cretaceous (?); Königs-Wusterhausen.
Artocarpidium cretaceum, Ettingshausen, 1867 A, p. 251, pl. ii,
fig. 4. Cenomanian; Niederschoena, Saxony,
— Guillemainii, Menzel, 1909, p. 401, pl. ii, figs. 4, 5, 6.
Senonian; Kamerun.
— pseudo-cretaceum, Ettingshausen, 1893, p. 148; & 1895, p. 22,
pl. ii, fig. 11. Cretaceous; Australia.
1 . 0
Artocarpophyllum occidentale, Dawson, 1894, p. 60, pl. xii, fig. 51;
pl. xiii, fig. 52. Upper Cretaceous; Vancouver Island, Canada.
Artocarpus Dicksoni, Nathorst, 1890 A, p. 6, pl. i, figs. 1-4.
Upper Cretaceous; Greenland.
— Lessigiana (Lesquereux), Knowlton, 1893 c, p. 24.
Lower Laramie Formation; Colorado, U.S.A.
— undulata, Hosius, 1870 A, p. 100, pl. xvi, fig. 29.
Senonian; Legden, Westphalia.
Arundinites oppelensis, Roemer, 1870, p. 291, pl. xxvii, fig. 6.
Cenomanian; Oppeln, Upper Silesia,
— Wohlfarthi, Otto, 1854, p. 27, pl. iv, fig. 2; pl. vii, figs. 1-5.
(= Cycadeites? Wohlfarthi (Otto), Geinitz, 1875 B.)
Quadersandstein; Saxony,
Arundo cretaceus, Lesquereux, 1868, p. 92. (= Phragmites cretaceus,
Lx., 1874.) Dakota Group; Nebraska, U.S.A.
grænlandica, Heer, 1874 A, p. 104, pl. xxviii, figs. 8-11.
Atane Beds; Greenland
Asimina eccenica, Lesquereux, 1873, p. 387; & 1878 B, p. 251, pl. xliii,
figs. 7, 8. Laramie Formation; Wyoming, U.S.A.
Aspidiophyllum dentatum, Lesquereux, 1883, p. 88; & 1892, p. 212,
pl. xxxix, fig. 1. Dakota Group; Kansas, U.S.A.
— platanifolium, Lesquereux, 1883, p. 88, pl. ii, fig. 4. Ibid.
— trilobatum, Lesquerenx, 1876 B, p. 361, pl. ii, figs. 1, 2. Ibid.
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Aspidium angustipinnatum, Fontaine, 1889, p. 98, pl. xvi, figs. 1, 3, 8; pl. xvii, fig. 1; pl. xix, fig. 10. (= Dryopteris angustipinnata (Font.), Knowlton, 1898, p. 91; re-named.) Potomac Formation: Virginia, U.S.A. --- angustipinnatum montanense, Fontaine, 1893, p. 491, pl. lxxiv, figs. 1, 1a. (= Dryopteris angustipinnata montanense (Font.), Knowlton, 1898, p. 91; re-named.) Kootanie Formation; Montana, U.S.A. --- cretaceo-zeelandicum, Ettingshausen, 1887 A, p. 174 (34), pl. vii, figs. 2, 3. Upper Cretaceous; New Zealand. - cystopteroides, Fontaine, 1889, p. 99, pl. xvi, fig. 2. (= Dryopteris cysteropteroides (Font.), Knowlton, 1898, p. 91; re-named.) Potomac Formation; Virginia, U.S.A. — dentatum, Fontaine, 1889, p. 102, pl. xxv, figs. 6, 7. (= Dryopteris dentata (Fontaine), Knowlton, 1898, p. 91; re-named.) — Dunkeri (Schimper), Fontaine, 1889, p. 101, pl. xxii, fig. 9; pl. xxv. figs. 11, 12; pl. xxvi, figs. 2, 8, 9, 18. (= Cladophlebis Dunkeri (Schimp.), Seward, 1894 A, p. 100.) Ibid. - ellipticum, Fontaine, 1889, p. 95, pl. xiii, figs. 9, 10. (=Dryopteris elliptica (Font.), Knowlton, 1898, p. 92; re-named.) Ibid. — fecundum, Heer, 1882, p. 32, pl. xxix, figs. 5, 9. Atane Beds; Greenland. - Foersteri, Renault, 1888, p. 352 [nomen nuduin]. Cretaceous; France. - fredericksburgense, Fontaine, 1889, p. 94, pl. xi, figs. 1-6; pl. xii, figs. 1-6; pl. xvi, fig. 9; pl. xix, figs. 6, 7. (= Dryopteris fredericksburgense (Font.), Knowlton, 1898, p. 92; re-named.) Potomac Formation; Virginia, U.S.A. heterophyllum, Fontaine, 1889, p. 96, pl. xiv, figs. 1-5; pl. xv, figs. 1-5. (= Dryopteris heterophylla (Font.), Knowlton, 1898, p. 92; re-named.) Jenseni, Heer, 1882, p. 31, pl. xvi, fig. 4; pl. xxix, fig. 4; pl. xxx, Atane Beds; Greenland. figs. 1-6. Kennerlyi, Newberry, 1863, p. 513; & Hollick in Newberry, 1898, p. 11, pl. xvi, figs. 4, 5. (= Dryopteris Kennerlyi (Newberry) Upper Cretaceous; British Columbia. Knowlton, 1898.) macrocarpum, Fontaine, 1889, p. 103, pl. xvii, fig. 2. (= Dryopteris macrocarpa (Font.), Knowlton, 1898, p. 92; re-named.) Potomac Formation; Virginia, U.S.A. \_\_ microcarpum, Fontaine, 1889, p. 103, pl. lix, figs. 2, 12; pl. lx, figs. 6, 7. (=Dryopteris microcarpa (Font.), Knowlton, 1898, p. 92; Ibid. re-named.)

— monocarpum, Fontaine, 1893, p. 490, pl. lxxxiii, figs. 4-6, 6 a; pl. lxxxiv, figs. 3, 3 a. (= Dryopteris monocarpa (Font.), Knowlton,

— montanense, Fontaine, 1893 p490, p.l. lxxx ii, figs. 1-3; pl. lxxxiii, figs. 2, 3, 3 α. (= Dryopteris montanense (Font.), Knowlton, 1898,

1898, p. 92; re-named.)

p. 92; re-named.)

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Ibid,

Kootanie Formation; Montana, U.S.A.

Aspidium oblongifolium, Fontaine, 1889, p. 100, pl. xxi, fig. 5. (Dryopteris oblongifolia (Font.), Knowlton, 1898, p. 92; re-named.) Potomac Formation; Virginia, U.S.A. — Oerstedi, Heer, 1882, p. 30, pl. xxxiv, figs. 3, 4. (= Dryopteris Erstedi (Heer), Knowlton, 1898, p. 92; re-named.) Atane Beds; Greenland. parvifolium, Fontaine, 1889, p. 100, pl. xxi, fig. 6; pl. xxiv, fig. 8; pl. xxv, fig. 10; pl. xxvi, figs. 1, 14, 16, 17. (=Dryopteris parvifolia (Fontaine), Knowlton, 1898; re-named.) Potomac Formation; Virginia, U.S.A. — pinnatifidum, Fontaine, 1889, p. 101, pl. xxi, fig. 15. (= Dryopteris pinnatifida (Fontaine), Knowlton, 1898; re-named.) Ibid. --- Schowii, Heer, 1882, p. 31, pl. xxxii, figs. 10, 10 b. Atane Beds; Greenland. - ursinum, Heer, 1870, p. 462, pl. xxxix, fig. 6 a. (Recorded by Heer, 1880 B, from Kome Beds.) Miocene; Greenland. -- virginicum, Fontaine, 1889, p. 97, pl. xv, fig. 7; pl. xxi, fig. 14. (= Dryopteris virginica (Fontaine), Knowlton, 1898; re-named.) Potomac Formation; Virginia, U.S.A. Aspleniopteris adiantifolia, Fontaine, 1889, p. 118, pl. xvi, fig. 6. --- Nilssoni, Sternberg, 1825, p. xxii, pl. xliii, figs. 3, 4, 5. Greensand; Hör, Sweden. —— pinnatifida, Fontaine, 1889, p. 118, pl. xxii, figs. 1-3, 6, 7. Potomac Formation; Virginia, U.S.A. Asplenites dubius, Velenovsky, 1888 B, p. 16, pl. ii, figs. 17-19. Chlomeka Beds; Leipa, Bohemia. --- Trevirani, Debey, 1848, p. 116 [nomen nudum]. Quadersandstein; Bavaria. Cenomanian; Moletein, Moravia. Asplenium albertum, Dawson, 1886, p. 11, pl. iii, fig. 6. Mill Creek Series; Mill Creek, Canada. Boyeanum, Heer, 1874 A, p. 33, pl. xi, fig. 9. Kome Beds; Greenland. - Brongniarti, Debey & Ettingshausen, 1859 B, p. 193 (13), pl. ii, figs. 1-3. (= Hausmannia (?) Brongniarti (Debey & Ettingshausen), Richter, 1906.) Senonian; Aix, Rhenish Prussia. - cænopteroides, Debey & Ettingshausen, 1859 B, p. 194 (14), pl. ii, Senonian; Aix, Rhenish Prussia. figs. 8-9. — calopteris (Debey & Ettingshausen), Heer, 1883 A, p. 5. (=Benizia calopteris, Debey & Ettingshausen.) Patoot Beds; Greenland. — Dicksonianum, Heer, 1874 A, p. 31, pl. i, figs. 1-5. Kome Beds; Greenland. - dubium, Fontaine, 1889, p. 109, pl. x, fig. 9. Potomac Formation; Virginia, U.S.A. - Foersteri, Debey & Ettingshausen, 1859 B, p. 193 (13), pl. ii, figs. 4-7, 11. Senonian; Aix, Rhenish Prussia.

Asplenium Haguei, Knowlton, 1899 B, p. 655, pl. lxxvii, figs. 1, 2.
Laramie Formation; Yellowstone Park, U.S.A.
Johnstrupi (Heer), Schimper, 1869, p. 660; & Heer, 1874 A, p. 32,
pl. i, figs, 6, 7. (= Sphenopteris Johnstrupi, Heer.)
Kome Beds; Greenland.
— lapideum, Heer, 1882, p. 3, pl. ii, figs. 3, 3 b. Ibid.
- magnum, Knowlton, 1896, p. 450 [nomen nudum].
Laramie Formation; Yellowstone Park, U.S.A.
Martinianum, Dawson, 1886, p. 5, pl. i, fig. 1.
Kootanie Formation; Martin Creek, Canada.
Nauckhoffianum, Heer, 1880 B, p. 3, pl. i, figs. 9-12.
Kome Beds; Greenland.
Niobrara, Dawson, 1883, p. 20, pl. i, fig. 1.
Upper Cretaceous; Peace River, North-West Territory.
- Nordenskiöldi, Heer, 1874 A, p. 33, pl. ii, figs. 17 a, 17 b.
Kome Beds; Greenland.
— Nordstroemi, Heer, 1874 A, p. 93, pl. xxvi, fig. 6 a.
Atane Beds; Greenland.
— Palæopteris, Unger, 1866, p. 3, pl. i, figs. 4-8.
Lower Cretaceous; New Zealand.
Pringelianum, Heer, 1883 A, p. 4, pl. xlviii, figs. 9, 9 b.
Patoot Beds; Patoot, Greenland.
raritanense, Berry, 1909, p. 246, pl. xviii, fig. 1.
Raritan Formation; New Jersey, U.S.A.
— scrobiculatum, Heer, 1883 A, p. 4, pl. xlviii, figs. 10, 10 b.
Patoot Beds; Patoot, Greenland.
— tenellum, Knowlton, 1900, p. 19, pl. iii, figs. 1, 2.
Montana Formation; Wyoming, U.S.A.
Velenovskyi, Marik, 1901, p. 6, pl. i, fig. 13.
Cenomanian; Bohemia.
— wyomingense, Knowlton, 1900 A, p. 19, pl. iii, fig. 12.
Montana Formation; Wyoming, U.S.A.
sp., Knowlton, 1900 A, p. 20, pl. iii, fig. 11.
Asterophyllites cretaceus, Feistmantel, 1874, p. 267. (= Pseudo-
asterophyllites cretaceus, Velenovsky, 1887 A.)
Perucer Beds; Bohemia.
Asterosoma radiciforme, Otto, 1854, p. 15, pl. ii, fig. 4; pl. iii,
figs. 1, 2. Quadersandstein; Saxony.
Astrocaryopsis Sanctæ-Manehildæ, Fliche, 1896, p. 276, pl. xiii,
figs. 4, 5, text-fig. 12. Cenomanian; Sainte-Menehould, France.
Athrotaxopsis expansa, Fontaine, 1889, p. 241, pl. exiii, figs. 5, 6
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18, 22. Potomac Formation; Virginia, U.S.A.
grandis, Fontaine, 1889, p. 240, pl. cxiv, figs. 1-3; pl. cxvi, figs. 1-4;
pl. exxxv, fig. 10.
pachyphylla, Fontaine, 1889, p. 242, pl. cxv, figs. 1, 3; pl. cxvi,
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Athrotaxopsis tenuicaulis, Fontaine, 1889, p. 241, pl. cxiv, figs. 4, 5
       pl. exv, fig. 4; pl. exvi, fig. 6; pl. exvii, fig. 2.
                                   Potomac Formation; Virginia, U.S.A.
Aulacolepis rhomboidalis, Ettingshausen, 1893, p. 147; & 1895,
                                                  Cretaceous; Australia.
       p. 12, pl. i, fig. 10.
Aulacophycus pedatus, Heer, 1877, p. 143, pl. lviii, fig. 12.
                                               Neocomian; Switzerland.
Baiera arctica, Heer, 1874 A, p. 37, pl. iii, fig. 3.
                                                 Kome Beds; Greenland.
— brevifolia, Newberry, 1891, p. 199, pl. xiv, fig. 3.
                                  Kootanie Formation; Montana, U.S.A.
- cretosa, Schenk, 1871 A, p. 5, pl. i, fig. 7. (= Sclerophyllina
       cretosa, Heer.)
                                    Wernsdorfer Beds; Austrian Silesia.
— dichotoma?, Heer (non Braun), 1876 A, p. 49, pl. xxxii, fig. 1.
                                                 Cretaceous; Spitzbergen.
--- foliosa, Fontaine, 1889, p. 213, pl. xciv, fig. 13.
                                    Potomac Formation; Virginia, U.S.A.
- grandis, Heer, 1874 A, p. 37, pl. iii, fig. 4. Kome Beds; Greenland.
— incurvata, Heer, 1882, p. 45, pl. xiii, fig. 6.
                                                 Atane Beds; Greenland.
--- leptopoda, Heer, 1882, p. 46, pl. xxviii, fig. 9.
                                                                    Ibid.
  — longifolia (Pomel), Heer, 1876 c, p. 39, pl. viii, fig. 6. (= Dicro-
       pteris longifolia, Pomel, 1849. Recorded Canadian Kootanie by
       Dawson, 1886.)
                                                   Jurassic; Spitzbergen.
--- sagittata, Heer, 1882, p. 46, pl. xxx, fig. 18.
                                                 Atane Beds; Greenland.
Bajera scanica, Sternberg, 1825, p. xxviii, pl. xlvii, fig. 2.
                                                Greensand; Hör, Sweden.
 Baieropsis adiantifolia, Fontaine, 1889, p. 211, pl. xcii, figs. 8, 9;
       pl. xciii, figs. 1-3; pl. xciv, figs. 2, 3. (Re-named by Berry,
       1910 D, Acrostichopteris adiantifolia).
                                    Potomac Formation; Virginia, U.S.A.
 adiantifolia, var. minor, Fontaine, 1889, p. 212, pl. xciv, fig. 1.
                                                                    Ibid.
 ---- denticulata, Fontaine, 1889, p. 210. pl. xciii, fig. 7.
                                                                     Ibid.
 — denticulata, var. angustifolia, Fontaine, 1889, p. 210, pl. xcii,
       fig. 7.
                                                                     Ibid.
 -- expansa, Fontaine, 1889, p. 207, pl. lxxxix, figs. 1, 3; pl. xc, fig. 1;
        pl. xci, fig. 2; pl. xcii, fig. 5.
                              Potomac Formation; Fredericksburg, U.S.A.
 — foliosa, Fontaine, 1889, p. 209, pl. xciii, figs. 4-6.
 - longifolia, Fontaine, 1889, p. 210, pl. xci, fig. 6. (= Acrosticho-
       pteris pluripartita (Fontaine), Berry, 1910 p.)
                                                                     Ibid.
   — macrophylla, Fontaine, 1889, p. 212, pl. xc, fig. 6.
                                                                     Ibid.
 --- pluripartita, Fontaine, 1889, p. 208, pl. lxxxix, fig. 4; pl. xc.
        figs. 2-5; pl. xci. figs. 1, 3, 4, 7; pl. xcii, figs. 1, 2, 6. (= Acro-
        stichopteris pluripartita (Fontaine), Berry, 1910 p.)
                                                                     Ibid.
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Baieropsis pluripartita, var. minor, Fontaine, 1889, p. 208, pl. xci, fig. 5; pl. xcii, figs. 3, 4. (= Acrostichopteris pluripartita (Fontaine). Berry, 1910 p.) Potomac Formation; Virginia, U.S.A. - sp., Dawson, 1892, p. 87. Kootanie Formation; British Columbia. Bambusites australis, Ettingshausen, 1887 A. p. 180 (40), pl. vii. fig. 21; pl. viii, figs. 1-3, 3a, Upper Cretaceous; New Zealand. Bambusium latifolium, Heer, 1881, p. 22, pl. xix, figs. 1-3, 1 c. Cretaceous: Portugal. --- neocomense, Heer, 1877, p. 146, pl. lviii, fig. 23. Neocomian; Switzerland. Banisteriophyllum cretaceum, Ettingshausen, 1895, p. 47, pl. iv, fig. 2. Cretaceous; Australia, Banksia crenata, Ettingshausen, 1893, pp. 140, 149; & 1895, p. 31, Cretaceous; Australia. - cretacea, Ettingshausen, 1893, p. 149; & 1895, p. 28, pl. iii, figs. 9, — longifolia, Ettingshausen, 1851, p. 730, pl. xxxi, fig. 19. (=Myrica longifolia, Unger.) Cenomanian; Niederschoena, Saxony. --- plagioneura, Ettingshausen, 1893, p. 141; & 1895, p. 29, pl. iii, fig. 8. Cretaceous; Australia. --- prototypos, Ettingshausen, 1851, p. 732; & 1852 A, p. 822, pl. lxiii. figs. 2, 3. Cenomanian; Niederschoena, Saxony. — pusilla, Velenovsky, 1883, p. 7 (32), pl. i (ix), figs. 14-17. Cenomanian; Bohemia. ---- sub-longifolia, Ettingshausen, 1893, p. 141; & 1895, p. 29, pl. iii, Cretaceous: Australia. fig. 7. Banksites pusillus, Velenovsky, 1882 A, p. 213 [nomen nudum]. Cretaceous; Bohemia, --- Saportanus, Velenovsky, 1882 A, p. 213; & 1883, p. 7 (32), pl. i Cenomanian; Bohemia. (ix), figs. 18-20. Bauhinia cretacea, Newberry, 1886 B, p. 77, pl. lvi, fig. 5. Middle Cretaceous; New Jersey, U.S.A. \_\_\_\_ ? gigantea, Newberry, 1895, p. 93, pl. xx, fig. 1. Amboy Clay; Woodbridge, U.S.A. — marylandica, Berry, 1908 c, p. 219, three text-figs. Magothy Formation; Maryland, U.S.A. Belodendron densifolium, von der Marck, 1864, p. 80, pl. xiii, Upper Senonian; Sendenhorst, Westphalia. figs. 8, 9. - gracile, Debey, 1849, p. 299 [nomen nudum]. Senonian; Aix, Rhenish Prussia. \_\_\_\_ lepidodendroides, Debey, 1848, p. 121 [nomen nudum]. Ibid. \_\_\_ Neesii, Debey, 1848 A, p. 121 [nomen nudum]. Ibid. Benizia calopteris, Debey & Ettingshausen, 1859 B, p. 216 (36), pl. v figs. 13-17. (= Asplenium calopteris, Heer, 1883 A.) Senonian; Aix, Rhenish Prussia,

Bennettites dacotensis, McBride, 1893, p. 249, pl. xi, figs. 1, 2. (= Cycadeoidea dacotensis of Ward, 1894). Dakota Group; S. Dakota, U.S.A. — Gibsonianus, Carruthers, 1870, p. 700, pls. lviii-lx. (=Bennettites Gibsoni, Carruthers, 1868.) Lower Greensand; Isle of Wight. - Gibsoni, Carruthers [nomen nudum]. (=Bennettites Gibsonianus, Carruthers, 1870.) — Maraniana, Scarabelli MS. in Capellini & Solms-Laubach, 1892, p. 110, pl. iii, fig. 4; pl. ii, fig. 3. Cretaceous (?); Italy. -- maximus, Carruthers, 1870, p. 699. Lower Greensand; Shanklin, 1sle of Wight. - Schachtii (Coemans), Carruthers, 1870, p. 699. (= Cycadeoidea Schachti, Capellini & Solms-Laubach, 1892.) Gault ; Belgium. Benstedtia sp. (Mackie), Seward, 1896 B, p. 219, pl. xiv, fig. 3. (= Dracæna Benstedtii, Mackie, 1862.) Greensand; Maidstone, Kent. Benthamia dubia, Velenovsky, 1887, p. 11 (72), pl. vii (xxx), figs. 4, 6. Perucer Beds; Vyserovic, Bohemia. Benzoin Masoni (Lesquereux), Knowlton, 1898, p. 47 (re-naming Lindera Masoni, Lesquereux, 1892). Dakota Group; Kansas, U.S.A. --- venustum (Lesquereux), Knowlton, 1898, p. 47 (re-naming Lindera venusta, Lesquereux, 1892). Dakota Group; Kansas, U.S.A. Bergeria minuta, Presl in Sternberg, 1838, p. 184, pl. xlix, figs. 2 a, b, 3. Cenomanian; Saxony. Betula atavina, Heer, 1883 A, p. 22, pl. lv, figs. 8, 21 b. Patoot Beds; Greenland. — beatriciana, Lesquereux, 1868, p. 95; & 1874, p. 61, pl. v, fig. 5; pl. xxx, fig. 4. Dakota Group; Nebraska, U.S.A. ---- Goepperti, Lesquereux, 1878 в, р. 138, pl. xvii, figs. 21-23. Laramie Formation; Wyoming, U.S.A. — perantiqua, Dawson, 1883, p. 27, pl. vii, fig. 27. Upper Cretaceous; Vancouver Island, Canada. --- Stevensonii, Lesquereux, 1872, p. 293; & 1878 B, p. 139, pl. xviii, figs. 1-5. Laramie Formation, Wyoming, U.S.A. --- tremula, Heer, 1883 A, p. 21, pl. liii, fig. 1 c; pl. lv, fig. 9. Patoot Beds; Greenland. vetusta, Heer, 1883 A, p. 22, pl. lv, fig. 7. Ibid. Betulites denticulata, Heer in Capellini & Heer, 1867, p. 15, pl. iv, figs. 5, 6. Dakota Group; Nebraska, U.S.A. --- ? Hatcheri, Knowlton in Stanton & Hatcher, 1905, p. 141, pl. xviii, fig. 3. Judith River Beds; Montana, U.S.A. - populifolius, Lesquereux, 1892, p. 64, pl. vi, figs. 1, 2. Dakota Group; Kansas, U.S.A. --- rugosus, Lesquereux, 1892, p. 65, pl. vi, figs. 3-5. Ibid. Snowii, Lesquereux, 1892, p. 64, pl. v, figs. 1-4. Ibid. Westii, Lesquereux, 1892, p. 60, pl. iv, figs. 1-22; pl. v, figs. 5-14. Ibid,

Urgonian; Portugal.

Betulites Westii, var. crassus, Lesquereux, 1892, p. 63, pl. v, figs. 5-17. Dakota Group; Kansas, U.S.A. --- Westii, var. cuneatus, Lesquereux, 1892, p. 62, pl. v, fig. 8. Ibid. — Westii, var. grewiopsideus, Lesquereux, 1892, p. 63, pl. lxiv, fig. 10. - Westii, var. inæquilateralis, Lesquereux, 1892, p. 62, pl. v. figs. 10-13. Ibid. --- Westii, var. lanceolatus, Lesquereux, 1892, p. 62, pl. v. fig. 14. --- Westii, var. latifolius, Lesquereux, 1892, p. 61, pl. iv, figs. 9-11. Ibid. --- Westii, var. multinervis, Lesquereux, 1892, p. 62, pl. iv, figs. 20-22.Ibid. - Westii, var. oblongus, Lesquereux, 1892, p. 61, pl. iv, figs. 17-Ibid. Westii, var. populoides, Lesquereux, 1892, p. 63. Ibid. — Westii, var. obtusus, Lesquereux, 1892, p. 61, pl. iv. figs. 5-8. Ibid. --- Westii, var. quadratifolius, Lesquereux, 1892, p. 62, pl. v. fig. 9. Ibid. - Westii, var. reniformis, Losquereux, 1892, p. 62, pl. v. fig. 5. — Westii, var. rhomboidalis, Lesquereux, 1892, p. 62, pl. v, figs. 6, Ibid. --- Westii, var. rotundatus, Lesquereux, 1892, p. 61, pl. iv, figs. 12-- Westii, var. subintegrifolius, Lesquereux, 1892, p. 61, pl. iv. figs. 1-4. Ibid. --- sp., Lesquereux, 1892, p. 65, pl. v, fig. 18. Dakota Group; Dakota, U.S.A. Bignonia cordata, Velenovsky, 1887, p. 9 (70), pl. vi (xxix), fig. 5. (= Bignoniphyllum cordatum, Velenovsky, 1889.) Cenomanian; Bohemia. --- pulcherrima, Bayer, 1899, p. 33, pl. i, figs. 9-14; pl. ii, figs. 4-10; text-figs, 11, 12. Perucer Beds; Bohemia. - silesiaca, Velenovsky, 1887, p. 8 (69), pl. vii (xxx), figs. 1, 2, 5, 11, Cenomanian: Kieslingswalde. Bignoniphyllum cordatum, Velenovsky, 1889, pp. 54, 58. (= Bignonia cordata, Velenovsky, 1885.) Blechnum priscum, Ettingshausen, 1887 A, p. 174 (34), pl. vii, figs. 1, Upper Cretaceous; New Zealand. 1 a. - zeelandicum, Crié, 1889, p. 88 (14) [nomen nudum]. Cretaceous : New Zealand. Blyttia infracretacea, Saporta, 1894, p. 122, pl. xxiii, fig. 15; pl. xxiv,

Bombacophyllum argillaceum, Velenovsky, 1889. (= Bombax-

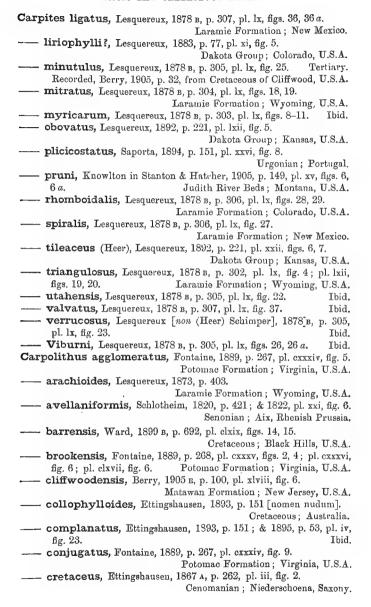
fig. 7 b.

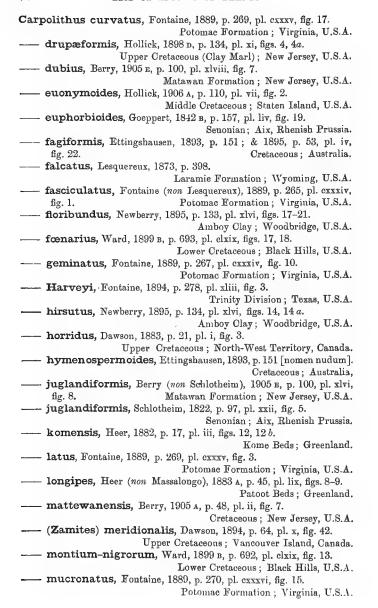
argillaceum, Velenovsky, 1883.)

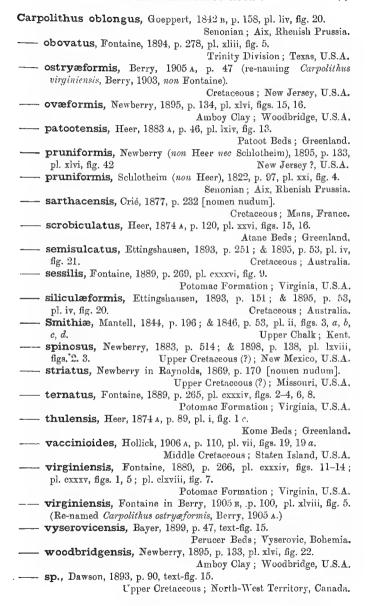
Bombax argillaceum, Velenovsky, 1882 A, p. 213; & 1883, p. 20 (45),
pl. ii (x), figs. 17-19; pl. iv (xii), figs. 6-9. (= $Bombacophyllum$
argillaceum, Velenovsky, 1889.) Cenomanian; Bohemia.
virginiensis, Fontaine, 1889, p. 310, pl. cli, fig. 4.
Potomac Formation; Virginia, U.S.A.
Bonaventurea cardinalis, Debey & Ettingshausen, 1859 B, p. 203,
pl. iii, figs. 2-19. Senonian; Aix, Rhenish Prussia.
Boueina Hochstetteri, Toula, 1884, p. 1319, pls. vii-x; & Steinmann,
1901, pp. 1-5, text-figs. 1-7. Upper Neocomian; Servia.
Bowerbankia attenuata, Debey, 1849, p. 299 (31) [nomen nudum].
Senonian; Aix, Rhenish Prussia.
- emarginata, Debey, 1849, p. 299 [nomen nudum]. Ibid.
maxima, Debey, 1849, p. 299 [nomen nudum]. Ibid.
— repanda, Debey, 1849, p. 299 [nomen nudum]. Ibid.
- rotundifolia, Debey, 1849, p. 299 [nomen nudum]. Ibid.
Brachyoxylon notabile, Hollick & Jeffrey, 1909, p. 54, pl. xiii,
figs. 2-6; pl. xiv, fig. 2. Raritan Formation; Staten Island, U.S.A.
Brachyphyllum Brardianum, Brongniart, 1849 A, p. 110 [nomen
nudum]. Lower Cretaceous; France.
confusum, Saporta, 1894, p. 112, pl. xx, fig. 8. Aptian; Portugal.
— corallinum, Heer, 1881, p. 21, pl. xii, figs. 1-3, 1 aa.
Cretaceous; Portugal.
crassicaule, Fontaine, 1889, p. 221, pl. c, fig. 4; pl. cix, figs. 1-7;
pl. ex, figs. 1-3; pl. exi, figs. 6, 7; pl. exii, figs. 6-8; pl. elxviii,
fig. 9. Potomac Formation; Virginia, U.S.A.
crassum, Lesquereux, 1892, p. 32, pl. ii, fig. 5.
Dakota Group; Kansas, U.S.A.
macrocarpum, Newberry MS. in Newberry, 1895 (footnote by
Hollick), p. 51; and for internal structure, Jeffrey, 1906 B, p. 384,
pl. xxvii. Amboy Clay; New Jersey, U.S.A.
obesiforme, Saporta, 1894, p. 176, pl. xxxi, figs. 12–13; pl. xxxiii,
fig. 4b; pl. xxxiv, fig. 8. Albian, Portugal.
obesiforme elongatum, Saporta, 1894, p. 176, pl. xxxi, fig. 14.
Ibid.
obesum, Heer, 1881, p. 20, pl. xvii, figs. 1-4.
Cretaceons; Portugal.
Orbignianum, Brongniart, 1849 B, p. 309; and d'Orbigny, 1852,
p. 650, text-fig. 529. Cenomanian; Isle d'Aise.
parceramosum, Fontaine, 1889, p. 223, pl. ex, fig. 4.
Potomac Formation; Virginia, U.S.A.
texense, Fontaine, 1894, p. 269, pl. xxxviii, figs. 3-5; pl. xxxix,
figs. 1, 1 a. Trinity Division; Texas, U.S.A.
Dakota Group; Virginia, U.S.A.
sp. ?, Fontaine, 1889, p. 223, pl. cxxxv, fig. 8. Ibid.
- sp.?, Hollick & Jeffrey, 1909, p. 37, pl. ix, figs. 5, 6; pl. vi, fig. 3;
pl. xiv, fig. 3. Raritan Formation; New York, U.S.A.

Brachyphyllum sp., Jeffrey, 1906 B, p. 389, pl. xviii, figs. 16-17.
Brasenia antiqua, Dawson, 1886, p. 15, text-fig. (Re-named by
Hollick, 1894 d, Nelumbo Dawsoni.)
Belly River Series; Medicine Hat, Canada.
Braseniopsis venulosa, Saporta, 1894, p. 192, pl. xxxiv, figs. 1-4.
Albian; Portugal.
- villarsioides, Saporta, 1894, p. 195, pl. xxxv, fig. 9. Ibid.
Bresciphyllum cretaceum, Velenovsky, 1889, p. 25, pl. v. figs. 2, 3.
Cenomanian; Bohemia.
Bromelia? tenuifolia, Lesquereux, 1892, p. 41, pl. i, fig. 13.
Dakota Group; Kansas, U.S.A.
Bronnites orientalis, Unger, 1850, p. 524. Turkey.
Bryocarpus monostachys, Debey, 1849, p. 299 [nomen nudum].
Senonian; Aix, Rhenish Prussia.
polystachys, Debey, 1849, p. 299 [nomen nudum]. Ibid.
Bumelia marcouana (Heer), Lesquereux, 1874, p. 90, pl. xxviii, fig. 2.
(= Leguminosites marcouanus, Heer in Dana)
Dakota Group; Nebraska, U.S.A.
- ? rhomboidea, Lesquereux, 1892, p. 113, pl. li, fig. 10.
Dakota Group; Kansas, U.S.A.
Butomites cretaceus, Velenovsky, 1889, p. 25, pl. iii, figs. 10-13, 15.
Cenomanian; Bohemia.
Conditional, Dollomia.
Caesalpinia Cookiana, Hollick in Newberry, 1895, p. 94, pl. xlii,
figs. 49, 50. Amboy Clay; New Jersey, U.S.A.
- raritanensis, Berry, 1909, p. 257.
Raritan Formation; New Jersey, U.S.A.
Calamitopsis Konigi, von der Marck, 1864, p. 81, pl. xiii, fig. 12.
(= Frenelopsis Konigii, Hosius & v. d. Marck, 1880.)
Senonian; Drensteinfurth, Westphalia.
Callistemon cretaceum, Velenovsky, 1889, p. 22, pl. i, fig. 3.
Cenomanian; Vyserovic, Bohemia.
Callistemophyllum ambiguum, Ettingshausen in Reuss, 1854,
p. 740 [nomen nudum]. Cenomanian; Moletein, Moravia.
- Bruderi, Engelhardt, 1892, p. 115, pl. i, figs. 6, 7.
Cretaceous: Bohemia.
Heerii, Ettingshausen, 1867 a, p. 261, pl. iii, fig. 13.
Cenomanian; Niederschoena, Saxony.
Callitris? sp., Fontaine, 1889, p. 272, pl. clxix, fig. 8.
Potomac Formation; Virginia, U.S.A.
Calycites alatus, Hollick, 1905 c, p. 417, pl. lxxii, fig. 8.
Cretaceous Shale; Long Island, U.S.A.
— diospyriformis, Newberry, 1895, p. 132, pl. xlvi, figs. 39–41.
Amboy Clay; Woodbridge, U.S.A.
hexaphylla, Lesquereux, 1873, p. 402,
Laramie Formation; Wyoming, U.S.A.
chovatus, Hollick, 1906 A, p. 109, pl. v, fig. 24.
Middle Cretaceous; Martha's Vineyard, U.S.A.

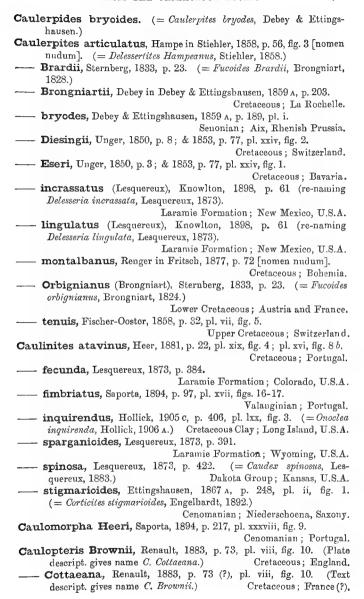
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Calycites parvus, Newberry, 1895, p. 131, pl. xlvi, figs. 28-29.
                                     Amboy Clay; Woodbridge, U.S.A.
--- sp., Lesquereux, 1892, p. 221, pl. xxii, fig. 8.
                                         Dakota Group; Kansas, U.S.A.
Campteroneura paradoxa, Debey, 1849, p. 299 [nomen nudum].
                                       Senonian; Aix, Rhenish Prussia,
Camptoneura truncata, Debey, 1849, p. 299 [nomen nudum]. Ibid.
Camptopteris biloba, Presl in Sternberg, 1838, p. 168, in Sternberg,
      1825, pl. xlii, fig. 2.
                                        Quadersandstein; Hör, Saxony.
Cannophyllites Hisingeri, Goeppert, 1848, p. 277 [nomen nudum].
                                              Quadersandstein; Silesia.
---- Nilssoni, Unger, 1850 A, p. 317.
                                           Greensand; Scania, Sweden.
--- septentrionalis, Nilsson, 1832, p. 346, pl. i, fig. 9.
Capparidoxylon Geinitzi, Schenk, 1883, p. 12, pl. i, figs. 3-4.
                                             Cretaceous; Cairo, Egypt.
Cardiopteris tasmanicus, Johnston, 1896, p. 63, fig. 9.
                                              Cretaceous (?); Tasmania.
Carex Clarkii, Berry, 1905 p, p, 347, text-fig. 1.
                                 Middle Cretaceous; Maryland, U.S.A.
Carolopteris aquensis, Debey & Ettingshausen, 1859 B, p. 206, pl. iii,
      figs, 20-27.
                                       Senónian; Aix, Rhenish Prussia.
  - asplenioides, Debey & Ettingshausen, 1859 в, р. 210, pl. iii,
      figs. 29-33; pl. iv, fig. 22.
                                                                 Ibid.
Carpinites arenaceus, Goeppert, 1847, p. 306, pl. xxxvii, figs. 5-7.
                                                   Cretaceous; Silesia.
--- microphyllus, Heer, 1883 A, p. 23, pl. lv, fig. 13.
                                              Patoot Beds; Greenland,
Carpinoxylon compactum, Vater, 1884, p. 848, pl. xxix, figs. 28, 29.
                                       Lower Senonian (?); Helmstedt.
Carpites alatus, Knowlton in Stanton & Hatcher, 1905, p. 150, pl. xvi,
      fig. 2.
                                   Judith River Beds; Montana, U.S.A.
  — burmanniæformis, Saporta, 1894, p. 151, pl. xxvi, figs. 9-12.
                                                  Urgonian; Portugal.
— bursæformis, Lesquereux, 1878 B, p. 306, pl. lx, fig. 30.
                                Laramie Formation; Wyoming, U.S.A.
 --- cocculoides? major, Lesquereux, 1878 B, p. 307, pl. lx, figs. 38, 39.
                                                                 Ibid.
--- coniger, Lesquereux, 1892, p. 221, pl. xxxviii, fig. 17.
                                        Dakota Group; Kansas, U.S.A.
--- cordiformis, Lesquereux, 1892, p. 220, pl. xxii, fig. 9.
  glumæformis, Lesquereux, 1878 B, p. 304, pl. xxxv, fig. 4 a; pl. lx,
                                Laramie Formation; Wyoming, U.S.A.
      figs. 14-17.
--- granulatus, Saporta, 1894, p. 209, pl. xxxvi, fig. 17.
                                              Upper Albian; Portugal.
- judithæ, Knowlton in Stanton & Hatcher, 1905, p. 149, pl. xvi,
                                  Judith River Beds; Montana, U.S.A.
— laurineus, Lesquereux, 1878 B, p. 304, pl. lx, figs. 20, 21.
                                 Laramie Formation; Colorado, U.S.A.
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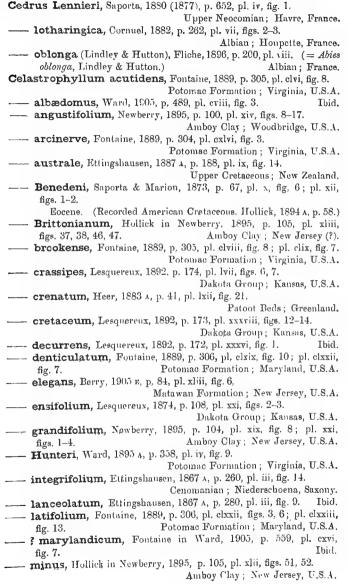




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Carpolithus sp., Heer, 1880, p. 8, pl. ii, figs. 10, 11.
                                                Cretaceous; Greenland.
--- ? sp., Lesquereux, 1874, p. 114, pl. xxvii, fig. 5; pl. xxx, fig. 11.
                                          Cretaceous; Nebraska, U.S.A.
--- sp., Otto, 1854, p. 33, pl. iv, figs. 5, 6.
                                                Dippoldswalde, Saxony.
Cassia angusta, Heer, 1882, p. 101, pl. xxvii, fig. 6. (= Palæocassia
      angustifolia, Ettingshausen, 1867.)
                                               Atane Beds : Greenland.
--- antiquorum, Heer, 1882, p. 101, pl. xxvii, fig. 5. (=Leguminosites
       cassiæformis, Heer, 1874 A.)
                                               Atane Beds; Greenland.
---- atavia, Velenovsky, 1887, p. 6, pl. viii, figs. 3-7, 10.
                                          Cenomanian; Kieslingswalde.
-- Etheridgei, Ettingshausen, 1893, p. 151; & 1895, p. 51, pl. iv,
      fig. 16.
                                                 Cretaceous; Australia.
 Ettingshauseni, Heer, 1882, p. 100, pl. xxvi, fig. 8.
                                               Atane Beds; Greenland.
— melanophylla, Velenovsky, 1887, p. 5, pl. viii, figs. 1, 2, 8, 9, 11,
      12.
                                               Perucer Beds; Bohemia.
-- phaseolitoides, Ettingshausen, 1893, p. 151 [nomen nudum].
                                                 Cretaceous; Australia.
--- polita, Lesquereux, 1892, p. 146.
                                        Dakota Group; Kansas, U.S.A.
--- præ-mennonia, Ettingshausen, 1893, p. 151; & 1895, p. 51,
      pl. iv, fig. 15.
                                                 Cretaceous; Australia.
 - præ-phaseolitoides, Ettingshausen, 1895, p. 52, pl. iv, fig. 14.
      (= Palæocassia phaseolitoides, Ettingshausen, 1887 A.)
--- problematica, Lesquereux, 1892, p. 146, pl. xxxviii, fig. 3.
                                        Dakota Group; Kansas, U.S.A.
--- sp., Hollick, 1906, p. 84, pl. xxxii, fig. 13.
                         Middle Cretaceous; Martha's Vineyard, U.S.A.
Castalia? duttoniana, Knowlton, 1900 A, p. 55, pl. xiii, fig. 7.
                                Montana Formation; Wyoming, U.S.A.
- Stantoni, Knowlton in Stanton & Hatcher, 1905, p. 147, pl. xix,
                                   Judith River Beds; Montana, U.S.A.
      fig. 4.
Castanea Hausmanni, Dunker, 1856, p. 181, pl. xxxiv, fig. 1.
                                Quadersandstein; Blankenburg, Saxony.
   - sp., Dawson, 1887, p. 27, pl. i, fig. 8.
                                                 Souris River, Canada.
Casuarina Covillei, Ward, 1895 A, p. 353, pl. iii, fig. 2.
                                  Potomac Formation; Virginia, U.S.A.
     primæva, Ettingshausen, 1893, p. 139; & 1895, p. 14, pl. i,
                                                 Cretaceous; Australia.
      figs. 16-20.
Casuarinites cretaceus, Ettingshausen, 1887 A, p. 181, pl. viii,
                                      Upper Cretaceous; New Zealand.
       figs. 6-7.
Caudex spinosus, Lesquereux, 1883, p. 91. (= Caulinites spinosa,
      Lesquereux, 1873.)
                                         Dakota Group; Kansas, U.S.A.
Caulerpa Lehmanni, Heer, 1877, p. 141, pl. lvii, fig. 11.
                                              Neocomian; Switzerland.
 sp., Lorenz, 1902, p. 23 (56), pl. vii, fig. 3.
                                        Lower Cretaceous; Switzerland.
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Caulopteris cretacea, Stenzel, 1897, p. 17. (= Protopteris punctata, Sternberg, pro parte.) Senonian; Westphalia.
Sternberg, pro parte.) Senonian; Westphalia. — cyatheoides, Unger, 1867, p. 649, pl. i, figs. 1-3.
Neocomian; Austria.
<ul> <li>Dicksonioides, Carruthers, 1865, pl. xiii (misprint for C. punctata).</li> </ul>
oppoliensis (Goeppert), Stenzel, 1897, p. 18. (= Rhizodendron oppoliense, Goeppert, 1886.) Cretaceous; Oppeln.
— punctata, Goeppert, 1836, p. 449. (= Protopteris punctata, Presl in Sternberg, 1838.)
— Songeri, Goeppert, 1836, p. 449, pl. xli, fig. 112. (= Protopteris Songeri, Presl in Sternberg, 1838.) Cretaceous; Bohemia.
Ceancthus constrictus, Hollick, 1906 A, p. 93, pl. xxxiv, figs. 15-17.  Middle Cretaceous; Martha's Vineyard, U.S.A.
cretaceus, Dawson, 1883, p. 28, pl. viii, fig. 33.
Upper Cretaceous; Vancouver Island, Canada.
prodromus, Heer, 1883 A, p. 41, pl. lxii, fig. 15.
Patoot Beds; Greenland.
sp.?, Hosius & von der Marck, 1880, p. 175, pl. xxxvi, fig. 132.
Upper Senonian; Haldem, Westphalia.
Cedrelospermites venulosus, Saporta, 1894, p. 98, pl. xvi, fig. 21.
Valanginian; Portugal.
Cedrophloios Bleicheri, Fliche, 1896, pp. 256-258, pl. xii, fig. 4; pl. xiv, fig. 3.  Albian; Vilotte, France,
pl. xiv, fig. 3. Albian; Vilotte, France. Cedroxylon barremianum, Fliche. 1900, p. 24. pl. ii, fig. 1.
Lower Cretaceous; Haute-Marne, France.
— blevillense, Lignier, 1907, p. 267, pl. xviii, figs. 15–17; pl. xxi,
fig. 66 & diagr.; pl. xxii, fig. 72; pl. xxiii, fig. 87.
Albian; Hève, France.
<ul> <li>Drewi, Shirley, 1898, p. 13. Upper Cretaceous; Queensland.</li> <li>Gardoniense, Crié, 1890, p. 236, pl. ii, figs. 1-4.</li> </ul>
Cenomanian; France.
- Hoheneggeri, Felix recorded Liebus, 1901, p. 17, in Perucer Beds of Bohemia.
inæquale, Reiss, 1907, p. 96, fig. 1 of unnumb. pl.
Upper Cretaceous; Japan.
— manehildense, Fliche, 1896, p. 247, pl. xc, fig. 3.
Cenomanian; Sainte-Menehould, France.
Matsumuræ, Stopes & Fujii, 1910, p. 42, pl. i, fig. 10; pl. iv, figs. 20-23.  Upper Cretaceous; Hokkaido, Japan.
reticulatum, Saporta, 1880 (1877), p. 653, pl. iii, fig. 3.
Neocomian; France.
- Ryedalense, Conwentz, 1892, p. 25, pl. vii, figs. 5-9; pl. viii, fig. 1. Senonian; Sweden.
Yendoi, Stopes & Fujii, 1910, p. 44, pl. iv, figs. 24-26.
Upper Cretaceous; Hokkaido, Japan,
Wernsdorfer Beds; Austrian Silesia.



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Celastrophyllum myrsinoides, Lesquereux, 1892, p. 174, pl. lviii,
        figs. 8, 9.
                                        Dakota Group; Kansas, U.S.A.
  - Newberryanum, Hollick in Newberry, 1895, p. 101, pl. xlix,
      figs. 1-27.
                                       Amboy Clay; Sayreville, U.S.A.
 - obliquum, Knowlton in Lesquereux, 1892, p. 173, pl. lvii, fig. 5.
                                        Dakota Group; Kansas, U.S.A.
--- obovatum, Fontaine, 1889, p. 307, pl. clxxii, figs. 9, 10.
                                 Potomac Formation; Maryland, U.S.A.
 -- obtusidens, Fontaine, 1889, p. 305, pl. clvi, fig. 5.
                                  Potomac Formation; Virginia, U.S.A.
--- obtusum, Heer, 1882, p. 96, pl. xxviii, fig. 15.
                                              Atane Beds; Greenland.
--- proteoides, Fontaine, 1889, p. 304, pl. cxlvi, fig. 5.
                                  Potomac Formation; Virginia, U.S.A.
---- pulchrum, Ward, 1899, p. 706, pl. elxxi, figs. 3, 4.
                                    Dakota Group; Black Hills, U.S.A.
--- robustum, Newberry, 1895, p. 103, pl. xlii, figs. 41, 42.
                                      Amboy Clay; New Jersey, U.S.A.
- ? saliciforme, Ward, 1905, p. 494, pl. eviii, fig. 7.
                            Older Potomac Formation; Virginia, U.S.A.
--- serratum, Saporta & Marion, recorded Heer, 1883 A, p. 41, pl. lxv,
                                              Patoot Beds; Greenland.
      fig. 6.
--- spatulatum, Newberry, 1895, p. 103, pl. xlii, figs. 43-45.
                                      Amboy Clay; New Jersey, U.S.A.
- tenuinerve, Fontaine, 1889, p. 306, pl. clxxii, fig. 2.
                                Potomac Formation; Maryland, U.S.A.
— undulatum, Newberry, 1895, p. 102, pl. xxxviii, figs. 1-3.
                                      Amboy Clay; New Jersey, U.S.A.
Celastrus arctica, Heer, 1883 A, p. 40, pl. lxi, figs. 5 d, 5 e.
                                              Patoot Beds; Greenland.
— ? sp., Hollick, 1893, p. 38, pl. i, fig. 4.
                               Raritan Formation; Staten Island, U.S.A.
Celtidophyllum cretaceum, Krasser, 1896, pl. xvi, figs. 8, 9, 10.
                                      Cenomanian; Kunstadt, Moravia.
— cretaceum integrifolia, Krasser, 1896, p. 116, pl. xvi, figs. 12-
                                                                  Ibid.

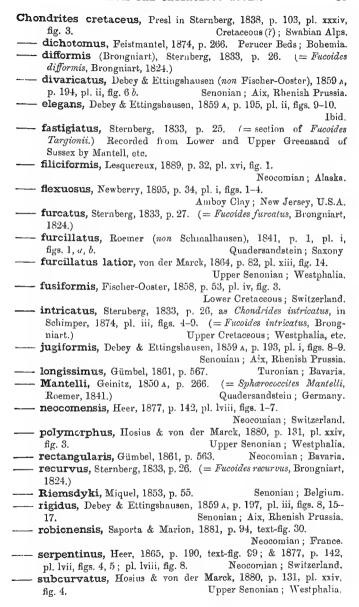
    præaustrale, Krasser, 1896, p. 130, pl. xvi, figs. 8-14.

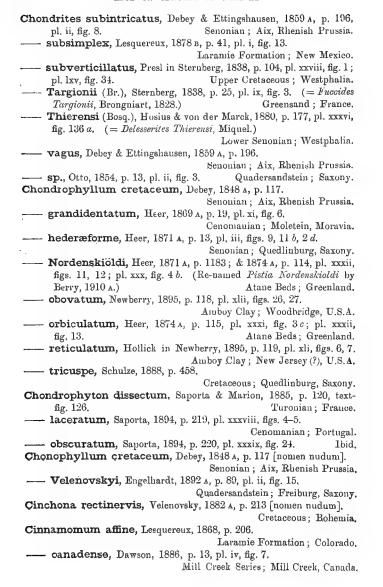
                                                                  Ibid.
Celtiophyllum cretaceum, Krasser, 1889, p. 34 [nomen nudum].
Celtis? ovata, Lesquereux, 1874, p. 66, pl. iv, figs. 2-3. (= Populites
       ovata, Lesquereux, 1868, & Ampelophyllum ovatum, Lesquereux,
       1876 в.)
                                      Dakota Group; Nebraska, U.S.A.
Cephalotaxites insignis, Heer, 1883 A, p. 10, pl. liii, fig. 12.
                                               Patoot Beds; Greenland.
Cephalotaxopsis brevifolia, Fontaine, 1889, p. 238, pl. lv, fig. 3;
       pl. evi, fig. o; pl. evii, fig. 5.
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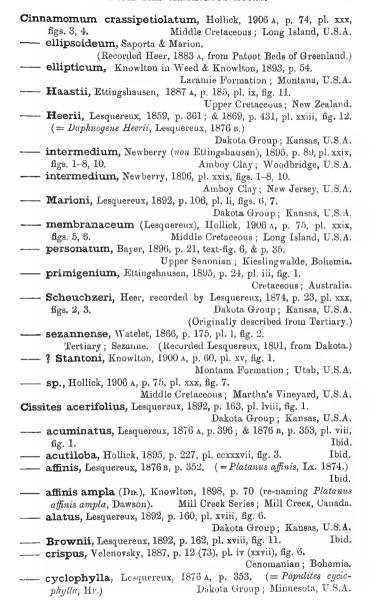
Potomac Formation; Virginia, U.S.A.

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Cephalotaxopsis magnifolia, Fontaine, 1889, p. 236, pl. civ, figs. 4,
      5; pl. cv, figs. 1, 2, 4; pl. cvi, figs. 1, 3; pl. cvii, figs. 1, 2, 4; pl. cviii,
      figs, 1, 3, 4,
                                 Potomac Formation: Virginia, U.S.A.
  - microphylla, Fontaine, 1889, p. 238, pl. cviii, fig. 5; pl. cix,
      fig. 9.
                                                                  Thid.
  -- ramosa, Fontaine, 1889, p. 237, pl. civ, figs. 2, 3; pl. cvi, figs. 2, 4;
      pl. evii, fig. 3; pl. eviii, fig. 2.
                                                                  Ibid.
--- ? rhytidodes, Ward, 1905, p. 258, pl. lxviii, fig. 8.
                                  Shasta Formation; California, U.S.A.
--- sp., Dawson, 1893, p. 89.
                                Kootanie Formation; British Columbia.
- sp., Fontaine in Diller & Stanton, 1894, p. 450.
                                     Knoxville Beds; California, U.S.A.
Cephalotaxospermum carolinianum, Berry, 1910 A, p. 187.
                             Middle Cretaceous; North Carolina, U.S.A.
Cerasus meridionalis, Eichwald, 1865, p. 67, pl. iii, fig. 23. Russia.
Ceratopetalum primigenium, Ettingshausen, 1893, p. 138, & p. 150;
      & 1895, p. 44, pl. iv, fig. 5.
                                                 Cretaceous : Australia.
   - rivulare, Ettingshausen, 1887 A, p. 186, pl. ix, figs. 15-16.
                                       Upper Cretaceous; New Zealand.
Ceratophyllum australe, Ettingshausen, 1893, p. 147; & 1895,
       p. 14, pl. i, figs, 14-15.
                                                 Cretaceous; Australia.
    - rivulare, Crié, 1889, p. 9 [nomen nudum].
                                             Cretaceous; New Zealand.
Ceratostrobus echinatus, Velenovsky, 1885, p. 25, pl. xi, figs. 7-15;
                                               Perucer Beds : Bohemia.
      pl. xiii, fig. 5.
    - formosus (Heer), Schulze, 1888, p. 18. (= Geinitzia formosa,
       Heer.)
                                                 Senonian; Altenburg.
 - sequoiæphyllum, Velenovsky, 1885, p. 24, pl. xii, figs. 14-16.
                                               Perucer Beds; Bohemia.
    - strictus, Schulze, 1888, p. 19 [nomen nudum]. (= Geinitzia
       cretacea, Schimper.)
                                                  Senonian; Altenburg.
Cercis eocenica, Lesquereux, 1873, p. 384.
                               Laramie Formation (?); Colorado, U.S.A.
Cercospora coriococcum, Bayer, 1899, pp. 3, 4, text-figs. 1, 1 a, 2.
                                               Perucer Beds; Bohemia,
Cesalpinites marticensis, Marion, 1890, p. 1054 [nomen nudum].
                                          Turonian ; Martiques, France.
Chamæcyparites Charonis, Velenovsky, 1889, p. 12, pl. iii,
      figs. 3-6; pl. ii, fig. 9.
                                                Cenomanian; Bohemia.
Changarniera dubia, Saporta, 1894, p. 110, pl. xx, figs. 13-14.
                                        Lower Cretaceous (?); Portugal.
Chara acanthica, Stacke, 1880, p. 199 [nomen nudum]. (= Kosmogyra
      acanthica, Stache, 1889.)
                                          Upper Cretaceous; Corgnale.
  — carinata, Stache, 1880, p. 198 [nomen nudum]. (= Kosmogyrellα
      carinata, Stache, 1889.) Liburnian (Upper Cretaceous); Cosina.
   - cingulata, Stache, 1880, p. 198 [nomen nadum]. (= Kosmogyra
      cingulata, Stache, 1889.)
                                                                  Ibid.
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Chara cosinensis, Stache, 1880, p. 198 [nomen nudum]. (= Nite'/a
cosinensis, Stache, 1889.) Liburnian (Upper Cretaceous); Cosina.
dolium, Stache, 1880, p. 199 [nomen nudum]. (= Cristatella
dolium, Stache, 1889.) Upper Cretaceous (?); Corgnale.
— guttifera, Stache, 1880, p. 199 [nomen nudum]. (= Kosmogyra
guttifera, Stache, 1889.) Ibid.
liburnica, Stache, 1880, p. 198 [nomen nudum]. (= Lagynophora
liburnica, Stache, 1889.) Upper Cretaceous (?); Cosina.
- ornata, Stache, 1880, p. 199 [nomen nudum]. (= Kosmogyra
ornata, Stache, 1889.)
perarmata, Stache, 1880, p. 199 [nomen nudum]. (= Kosmogyra
perarmata, Stache, 1889.) Upper Cretaceous (?); Corgnale.
polonica, Unger, 1860, p. 3, pl. ii, figs. 1-4.
Cretaceous (?); Galicia.
robusta, Stache, 1880, p. 179 [nomen nudum]. (= Nitella robusta,
Stache, 1889.) Upper Cretaceous; Cosina.
Stacheana, Unger, 1860, p. 3, pl. i, figs. 1-4. Ibid.
—— Stantoni, Knowlton, 1893 A, p. 141, text-figs. 1-3.
Bear River Formation; Wyoming, U.S.A.
- superba, Stache, 1880, p. 199 [nomen nudum]. (= Kosmogyra
superba, Stache, 1889.) Upper Cretaceous (?); Divacea.
Cheilanthites Mantelli, Goeppert, 1836, p. 231. (= Sphenopteris
Mantelli, Brongniart, 1828.) Tilgate Sands; Sussex.
Cheirolepis Choffati, Saporta, 1890 A, p. 814; & 1894, p. 90, pl. xvii,
figs. 4-9. Valanginian; Portugal.
Chiropteris elongata, Rossmässler, MS., in Cotta, 1836, p. 585.
Cenomanian; Niederschoena, Saxony.
obtusa, Rossmässler, MS., in Cotta, 1836, p. 585. Ibid.
Reichii, Bronn, 1837, pl. xxviii, fig. 1. (= Halyserites Reichii,
Sternberg.) Ibid.
— spatulata, Newberry, 1891, p. 199, pl. xiv, figs, 1, 2.
(= Sagenopteris?, Seward, 1910, p. 431.)
Kootanie Formation; Montana, U.S.A.
— Williamsii, Newberry, 1891, p. 198, pl. xiv, figs. 10, 11.
Kootanie Formation; Montana, U.S.A.
Choffatia Francheti, Saporta, 1894, p. 150, pl. xxiv, fig. 8; pl. xxvi,
figs. 19-22. Urgonian; Portugal.
Chondrites æqualis, Sternberg, 1833, p. 26. (= Fuccides æqualis,
Brongniart, 1824.)
aragonensis, Saporta, 1891 A, p. 312, pl. cclxxv, fig. 1.
Cretaceous; Aragon, France.
assimilis, Saporta, 1891 A, p. 312, pl. cclxxv, fig. 2.
Cretaceous; France.
bignoriensis, Mantell, 1854, p. 102, text-fig. 9. Chalk; Sussex.
The constant of the second of
- Bosqueti, Miquel, 1853, p. 54, pl. vi, fig. 4. Senonian; Belgium.
— bulbosus, Lesquereux, 1873, p. 373; & 1878, p. 42, pl. i, fig. 14.
Laramie Formation; New Mexico.

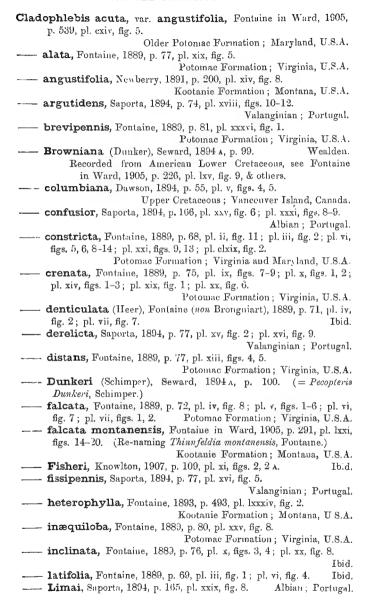




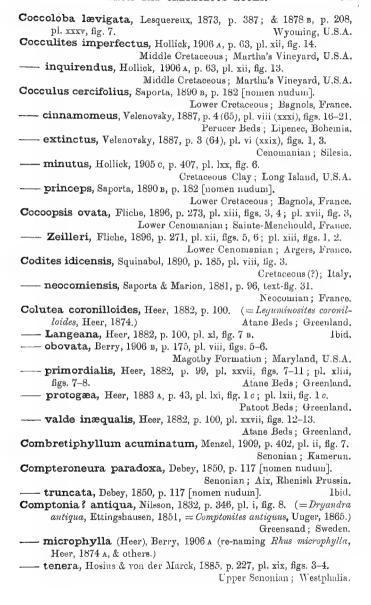


Cissites dentato-lobatus, Lesquereux, 1892, p. 164, pl. lxvi, fig. 4. Dakota Group; Kansas, U.S.A. formosus, Heer, 1882, p. 85, pl. xxi, figs. 5-8. Atane Beds; Greenland. --- formcsus magothiensis, Berry, 1910 II, p. 25. Magothy Formation; Maryland, U.S.A. — Harkerianus, Lesquereux, 1876 A, p. 307; & 1883 A, p. 67, pl. iii, figs. 3, 4. (= Sassafras harkeriana, Lx., 1873, & Sassafras (Araliopsis) harkerianum, Lx., 1874.) Dakota Group; Kansas, U.S.A. — **Heerii,** Lesquereux, 1876 д., р. 396; & 1876 в., р. 353, pl. vi, fig. 3. Ibid. ingens, Lesquereux, 1892, p. 159, pl. xix, figs. 2, 2 a. Ibid. ingens, var. parvifolia, Lesquereux, 1892, p. 160, pl. lvii, figs. 3, 4. - insignis, Heer in Capellini & Heer, 1867, p. 19, pl. ii, figs. 3, 4. Dakota Group; Nebraska, U.S.A. --- lobato-crenata (Lesquereux), Knowlton in Stanton & Knowlton, 1897, p. 145, Wyoming, U.S.A. - obtusilobus, Lesquereux (non Saporta), 1892, p. 161, pl. xxxiii, Dakota Group; Kansas, U.S.A. --- obtusilobus, Saporta (non Lesquereux), 1894, p. 190, pl. xxxiv, figs. 12-13. Albian; Portugal. -- obtusum, Lesquereux, 1876 B, p. 354. (= Sassafras obtusus, Lesquereux, 1872.) Dakota Group; Kansas, U.S.A. --- platanoidea, Hollick, 1895 p, p. 226, pl. cexxxvii, fig. 2. —— populoides, Lesquereux, 1892, p. 162, pl. xviii, figs. 12-14. — salisburiæfolius, Lesquereux, 1883, p. 66. (=Populites salisburiæfolius, Lx., 1868.) Dakota Group; Kansas, U.S.A. --- sinuosus, Saporta, 1894, p. 190, pl. xxxiv, fig. 11. Albian; Portugal. --- vitifolia, Velenovsky, 1882, p. 214 [nomen nudum]. (= Cissus vitifolia, Velenovsky.) Cenomanian; Bohemia, Cissophyllum exulum, Velenovsky, 1889, p. 24, pl. vi, figs. 4, 5 (= Premnophyllum exulum, Velenovsky.) Ibid. - vitifolium, Velenovsky, 1882 A, p. 214; & 1889, p. 25. (= Cissus vitifolium, Velenovsky.) Ibid. Cissus Browniana, Lesquereux in Winchell, 1885, p. 77; & 1895, p. 17, pl. A, fig. 8. Dakota Group; Minnesota, U.S.A. —— lobato crenatus, Lesquereux, 1873, p. 396; & 1878 B, p. 240, pl. xli, figs. 1-3. Laramie Formation; Wyoming. - vitifolia, Velenovsky, 1886, p. 8 (55), pl. ii (xvii), fig. 6; pl. iii (xviii), fig. 1. Cenomanian; Bohemia. Citrophyllum aligerum (Lesquereux), Berry, 1909, p. 258, pl. xviii a, figs. 1-8. (= Ficus aligera, Lesquereux.) Raritan Formation; New Jersey, U.S.A. Cladophlebis acuta, Fontaine, 1889, p. 74, pl. v, fig. 7; pl. vii, fig. 6; pl. x, figs. 6, 7; pl. xi, figs. 7, 8; pl. clxvi, fig. 5.

Potomac Formation; Virginia, U.S.A.

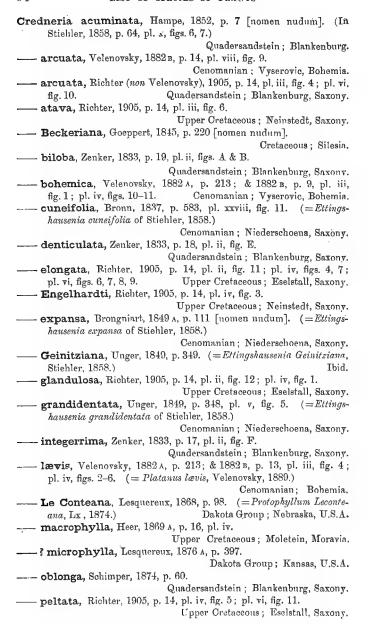


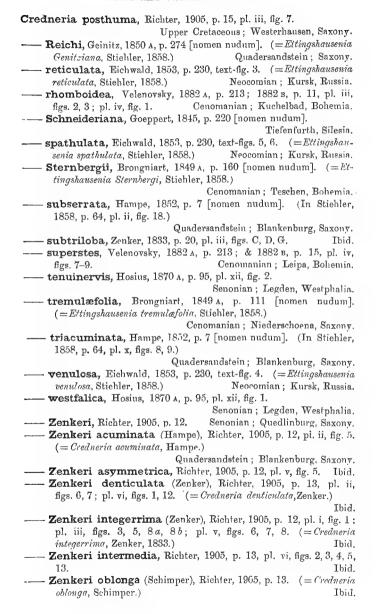
Cladophlebis minutissima, Saporta, 1894, p. 77, pl. xv, fig. 26; pl. xvi, fig. 19 c. Valanginian; Portugal. Nathorsti, Yokoyama, 1894, p. 220, pl. xxviii, figs. 3, 4, 10, 11. Neocomian; Japan. --- oblongifolia, Fontaine, 1889, p. 74, pl. vii, figs. 3-5. Potomac Formation; Virginia, U.S.A. --- obtusiloba, Saporta, 1894, p. 166, pl. xxix, fig. 9. Albian: Portugal. -- pachyphylla, Fontaine, 1889, p. 80, pl. xxv, fig. 9. Potomac Formation; Virginia, U.S.A. - parva, Fontaine, 1889, p. 73, pl. iv, fig. 7; pl. vi, figs. 1-3. Ibid. — petiolata, Fontaine, 1889, p. 80, pl. xxii, fig. 8. Ib.d. — rotundata, Fontaine, 1889, p. 78, pl. xx, figs. 9-10. 1bid. --- sinulatiloba, Saporta, 1894, p. 76, pl. xvi, figs. 1-2. Valanginian; Portugal. ---- skagitensis, Penhallow, 1907, p. 306, text-fig. 2. Cretaceous; British Columbia. --- sphenopteroides, Fontaine, 1889, p. 79, pl. xxi, fig. 4. Potomac Formation; Virginia, U.S.A. -- sulcycadina, Saporta, 1890 A, p. 1814; & 1894, p. 75, pl. xvii, fig. 18. Valanginian; Portugal. --- Ungeri (Dunker), Ward, 1905, p. 228, pl. lxv, figs. 15-16. (= Pecopteris Ungeri, Dunker.) Shasta Formation; California, U.S.A. — virginiensis, Fontaine, 1889, p. 70, pl. iii, figs. 3-8; pl. iv, figs. 1, 3-6. Potomac Formation; Virginia, U.S.A. --- wyomingensis, Fontaine in Ward, 1899 в, р. 656, pl. clx, figs. 16, Lower Cretaceous; Black Hills, U.S.A. — sp., Dawson, 1893, p. 85. Kootanie Formation; British N.W.Territory, Canada. --- sp.?, Fontaine, 1889, p. 76, pl. x, figs. 5, 8; pl. xx, fig. 7. Potomac Formation; Virginia, U.S.A. Clathraria ? galtiana, Hosius & von der Marck, 1880, p. 202, pl. lxii, fig. 180, Lower Gault; Westphalia. Lyellii, Mantell, 1827, p. 52, pl. i, figs. 1, 2, 7; pl. ii, figs. 1, 2, 3; pl. iii, fig. 8; pl. iii, fig. 4. Wealden; Sussex. (Recorded from Chalk Marl, Isle of Wight, Mantell, 1847, pp. 295 & 297 text-fig.) - Schachti (Coemans), Schimper, 1870. (= Cycadeoidea Schachti, Capellini & Solms, 1892.) Gault: Belgium. Clathropodium foratum, Saporta, 1875, p. 297, pl. exxiv, figs. 1, 2. (= Cycadeoidea forata, Saporta in Capellini & Solms, 1892.) Recorded from Gault; Havre (first described from Jurassic). — sp., Yokoyama, 1906, p. 37, pl. xii, fig. 2. Lower Cretaceous; China. Clathropteris egyptiaca, Seward, 1907. p. 253, text-fig. 1. Jurassic?; Egypt. (Shown by Newton 1909 to be Senonian.)



Comptoniopteris cercalina, Saporta, 1894, p. 129, pl. xxvi, fig. 24.
Urgonian; Portugal.
- intermedia, Marion, 1890, p. 1053. Turonian; Martigues, France.
—— provincialis, Marion, 1890, p. 1053.  Ibid.
Saportæ, Marion, 1890, p. 1053. Ibid.
Vasseuri, Marion, 1890, p. 1053. Ibid.
Comptonites antiques (Nilsson), Hisinger, 1837, p. 111, pl. xxxiv,
fig. 7; & Unger, 1865, p. 374, pl. i, fig. 1. (= Comptonia antiqua,
Wilson, 1832, = Dryandra antiqua, Ettingshausen, 1851.)
Greensand; Sweden.
Confervites? ægagropiloides, Bronguiart, 1828, p. 36, pl. i, figs. 4, 5.
Cretaceous; Denmark.
aquensis, Debey & Ettingshausen, 1859 A, p. 187, pl. i, fig. 4.
Senonian; Aix, Rhenish Prussia.
Brardii (Sternberg), Debey, 1848 A, p. 114.
Cretaceous; La Rochelle, France.
—— cæspitosus, Debey & Ettingshausen, 1859 A, p. 188, pl. i, figs. 10-12,
Senonian; Aix, Rhenish Prussia.
— dubius, Berry, 1903 c, p. 677, text-fig. 9, p. 678.
Matawan Formation; New Jersey, U.S.A.
fasciculata, Brongniart, 1828, p. 35, pl. i, figs. 1-3.
Cretuceous; Denmark.
orbigniana (Sternberg), Debey, 1848 A, p. 114.
Cretaceous; La Rochelle, France.
— ramosus, Debey & Ettingshausen, 1859 A, p. 188, pl. i, fig. 9.
Senonian; Aix, Rhenish Prussin.
— Woodwardii, Mantell, 1844, p. 104, text-fig. 4. Chalk; Norfolk.
Ccniferocaulon colymbeæforme, Fliche, 1900, p. 16.
Lower Cretaceous; France,
Coniopteris nitidula, Yokoyama, 1906, p. 35, pl. xii, figs. 4, 4 a.
Cretaceous; China.
Conites familiaris, Sternberg, 1825, p. xxxix, pl. xlvi, fig. 2.
(= Zamiostrobus familiaris, Bronn & Roemer, 1856.)
Pläner; Triblitz, Bohemia.
- gibbus, Reuss, 1844, p. 169. (= Microzamia gibba (Reuss), Corda,
1846.) Ibid.
insignis, Bronn & Roemer, 1856, p. 54, pl. xxviii, fig. 13.
Cenomanian; Niederschoena, Saxony.
Conospermites ellipticus, Fontaine, 1889, p. 279, pl. exxxviii, fig. 14.
Potomac Formation; Virginia, U.S.A.
hakeæfolius, Ettingshausen, 1867 A, p. 254, pl. iii, figs. 4, 12.
Cenomanian; Niederschoena, Saxony.
hakeæfolius, Velenovsky (non Ettingshausen), 1882 A, p. 213
[nomen nudum]. Cretaceous; Bohemia.
—— linearifolius, Ettingshausen, 1893, pp. 140, 149; & 1895, p. 27,
pl. iii, fig. 15. Cretaceous; Australia.

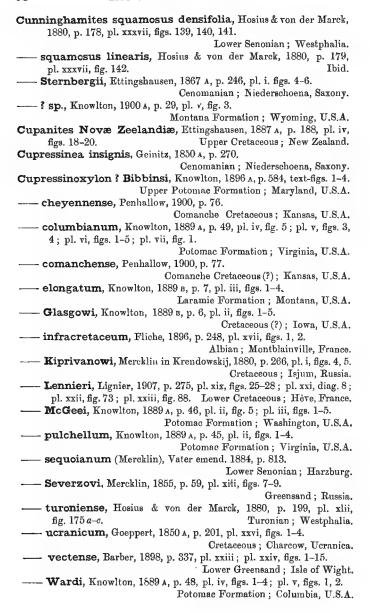
Corallinites galaxacera (Galaxaura), Massalongo, 1856, p. 42,
pl. vi, figs. 1-2. Cretaceous; Venice, Italy.
Cornophyllum vetustum, Newberry, 1895, p. 119, pl. xix, fig. 10.
Amboy Clay; Woodbridge, U.S.A.
Ccrnoxylon myricæforme, Vater, 1884, p. 846, pl. xxix, figs. 25, 26.
Lower Senonian (?); Helmstedt
Cornus cretacea, Caspary, 1888, p. 39. Königsberg, Prussia.
17. Ibid.
Atane Beds; Greenland.
— Holmiana, Heer, 1883 a, p. 36, pl. lxii, fig. 12; pl. lxiv, figs. 6, 7.
Patoot Beds; Greenland.
—— obesus, Dawson, 1894, p. 62, pl. ix, fig. 30.
Upper Cretaceous; Vancouver Island, Canada.
— platyphyllcides, Lesquereux, 1892, p. 126, pl. lxiv, fig. 15.
Dakota Group; Kansas, U.S.A.
— præcox, Lesquereux, 1892, p. 125, pl. xxiii, fig. 5. Ibid.
rhamnifolia, Weber, 1852, p. 192, pl. xxi, fig. 8. Tertiary.
(Recorded Lesquereux, 1872 & 1878 B. American
Laramie & Montana Formations.)
Studeri?, Heer, 1859. Tertiary.
(Recorded Ward, 1872, p. 293, & 1878, p. 244,
pl. xlii, figs. 4, 5, American Cretaceous.)
— suborbifera, Lesquereux, 1878 B, p. 243, pl. xlii, fig. 2.
Laramie Formation; Colorado, U.S.A.
— thulensis, Heer, 1883 A, p. 37, pl. lxii, figs. 9-11.
Patoot Beds; Greenland.
Corticites stigmarioides (Ettingshausen), Engelhardt, 1892, p. 116.
(= Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.
(= Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv,
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  2 æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  ——? æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rebnish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  ### Equidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  2 æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  — atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  2 æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  — atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  ? fragarioides, Heer, 1883 A, p. 43, pl. lxii, fig. 10 b.  Ibid.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansa, U.S.A.  2 æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  fragarioides, Heer, 1883 A, p. 43, pl. lxii, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  2 æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  fragarioides, Heer, 1883 A, p. 43, pl. lxii, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.  Dakota Group; Kansas, U.S.A.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  2 æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  fragarioides, Heer, 1883 A, p. 43, pl. lxii, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.  Dakota Group; Kansas, U.S.A.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  ### Audidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  fragarioides, Heer, 1883 A, p. 43, pl. lxiv, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.  Dakota Group; Kansas, U.S.A.  lawrenciana, Lesquereux, 1892, p. 142, pl. xxxviii, fig. 1.  monmouthensis, Berry, 1907 A, p. 675, text-fig. 1.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  ### Equidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  fragarioides, Heer, 1883 A, p. 43, pl. lxiv, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.  Dakota Group; Kansas, U.S.A.  lawrenciana, Lesquereux, 1892, p. 142, pl. xxxviii, fig. 1. Ibid.  monmouthensis, Berry, 1907 A, p. 675, text-fig. 1.  Magothy Formation; New Jersey, U.S.A.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  ? æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  ? fragarioides, Heer, 1883 A, p. 43, pl. lxii, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.  Dakota Group; Kansas, U.S.A.  Laramie Formation; New Jersey, U.S.A.  Magothy Formation; New Jersey, U.S.A.  tenuinervis, Lesquereux, 1892, p. 142, pl. liv, figs. 5-7.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1. Dakota Group; Kansas, U.S.A.  2 æquidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  — atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  2 fragarioides, Heer, 1883 A, p. 43, pl. lxii, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.  Dakota Group; Kansas, U.S.A.  — lawrenciana, Lesquereux, 1892, p. 142, pl. xxxviii, fig. 1. Ibid.  — monmouthensis, Berry, 1907 A, p. 675, text-fig. 1.  Magothy Formation; New Jersey, U.S.A.  — tenuinervis, Lesquereux, 1892, p. 142, pl. liv, figs. 5-7.  Dakota Group; Kansas, U.S.A.
(=Caulinites stigmarioides, Ettingshausen) Cretaceous; Bohemia.  Costarites undulatus, Debey, 1848 A, p. 115 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Cratægus aceroides, Lesquereux, 1892, p. 143, pl. liv, fig. 8; pl. lv, fig. 1.  Dakota Group; Kansas, U.S.A.  ### Equidentata, Lesquereux, 1878 B, p. 297, pl. lviii, figs. 4, 4 a.  Laramie Formation; Wyoming, U.S.A.  atavina, Heer, 1883 A, p. 43, pl. lxiv, fig. 11.  Patoot Beds; Greenland.  fragarioides, Heer, 1883 A, p. 43, pl. lxiv, fig. 10 b.  Lacoei, Lesquereux, 1892, p. 143, pl. lxiv, fig. 14.  Dakota Group; Kansas, U.S.A.  lawrenciana, Lesquereux, 1892, p. 142, pl. xxxviii, fig. 1. Ibid.  monmouthensis, Berry, 1907 A, p. 675, text-fig. 1.  Magothy Formation; New Jersey, U.S.A.





Credneria Zenkeri orbicularis, Richter, 1905, p. 12, pl. ii, fig. 2;
pl. v, figs. 2, 3. Upper Cretaceous; Saxony.
Zenkeri subserrata (Hampe), Richter, 1905, p. 13, pl. ii, fig. 8.
Quadersandstein; Blankenburg, Saxony.
- Zenkeri subtriloba (Zenker), Richter, 1905, p. 13, pl. ii, fig. 3;
pl. v, figs. 9-11. Senonian; Quedlinburg.
Zenkeri triacuminata (Hampe), Richter, p. 13, pl. ii, fig. 4;
pl. iv, fig. 2; pl. v, figs. (14), 15, 16. (= Credneria triacuminata,
Hampe.) Quadersandstein; Blankenburg, Saxony.
Zenkeri triloba, Richter, 1905, p. 12, pl. v, fig. 12.
Upper Cretaceous; Eselstall, Saxony.
— ? sp., Dunker, 1856, p. 182, pl. xxxv, fig. 1.
Quadersandstein; Blankenburg, Saxony.
- sp., Dunker, 1856, p. 180, pl. xxxiii, fig. 3.
— sp., Heer, 1874 A, p. 111, pl. xxxii, figs. 20, 21.
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sp., Otto, 1854, p. 47, pl. ix, figs. 8, 9. Dippoldswalde, Saxony.
sp., Richter, 1905, p. 14, pl. iii, fig, 2.
Upper Cretaceous; Salzberg, Saxony.
sp., Schenk, 1890, p. 485, text-fig. 286.
Quadersandstein; Blankenburg, Saxony.
Cretovarium japonicum, Stopes & Fujii, 1910, p. 70, pl. ix, figs. 58–60.
Upper Cretaceous; Hokkaido, Japan.
Cristatella doliolum, Stache, 1889, p. 136, pl. iv, fig. 8. (= Chara
doliolum, Stache, 1880.) Upper Cretaceous; Corgnale.
Crossochorda Marioni, Dewalque, 1880, p. 45, pl. ii, fig. 1.
Cretaceous; Condroz, Belgium.
Crotonophyllum cretaceum, Velenovsky, 1889, p. 20, pl. v, figs. 4-11.
Cenomanian; Vyserovic, Bohemia.
Cryptomeria primæva, Corda in Reuss, 1846, p. 89, pl. xlviii, figs 1–11.
Planer; Bohen.ia.
Cryptomeriopsis antiqua, Stopes & Fujii, 1910, p. 52, pl. i, fig. 11;
pl. vi, figs. 35-41; text-fig, 18.
Upper Cretaceous; Hokkaido, Japan.
mesozoica, Suzuki, 1910, p. 185, pl. vii, figs. 3-5. Ibid.
Cryptomerites hungaricus, Tuzson, 1908, p. 3, pl. ii, figs. 4, 5.
Upper Cretaceous; Hungary.
Ctenidium dentatum, Heer, 1881, p. 17, pl. xvi, figs. 12–15.
Cretaceous; Almargem, Portugal.
—— integerrimum, Heer, 1881, p. 17, pl. xvi, figs. 4-11. Ibid.
Ctenis imbricata, Fontaine, 1889, p. 177, pl. exxxviii, figs. 10–12.
Potomac Formation; Virginia, U.S.A.
Ctenophyllum latifolium, Fontaine, 1889, p. 175, pl. lxviii, figs. 2, 3.
Ibid.
Ctenopteris angustifolia, Fontaine, 1889, p. 159, pl. lxv, fig. 2;
pl. lxvii, fig. 4. Ibid.
— columbiensis, Penhallow, 1902 в, р. 26, text-fig. 1.
Upper Cretaceous; Vancouver Island, Canada.

Ctenopteris insignis, Fontaine, 1889, p. 156, pl. lxi, figs. 4, 5; pl. lxii, fig. 1; pl. lxiii, figs. 1, 2. Potomac Formation; Virginia, U.S.A. - integrifolia, Fontaine, 1889, p. 158, pl. lxii, fig. 2; pl. lxv, fig. 3. Ibid. --- longifolia, Fontaine, 1889, p. 159, pl. lxvii, fig. 5. Ibid. --- minor, Fontaine, 1889, p. 157, pl. lxvii, fig. 3. Ibid. --- ultima, Saporta, 1894, p. 84, pl. xv, fig. 27. Valanginian; Portugal. --- virginiensis, Fontaine, 1889, p. 157, pl. lxii, fig. 4; pl. lxv, fig. 1; pl. lxvi, fig. 4. Potomac Formation; Virginia, U.S.A. Culmites cretaceus, Ettingshausen (non Miquel), 1867 A, p. 247, pl. i. Cenomanian: Niederschoena, Saxony. - cretaceus, Miquel (non Ettingshausen), 1853, p. 53. Senonian: Belgium. -- priscus, Ettingshausen, 1852 c, p. 16, pl. iii, figs. 4-8. Wernsdorfer Beds (see Krasser, 1896, p. 146). - sp., Roemer, 1870, p. 291, pl. xxviii, fig. 14. Cenomanian; Silesia. Cunninghamia elegans, Corda in Reuss, 1846, p. 93, pl. xlix, figs. 29-31. Quadersandstein; Bohemia. ---- planifolia, Corda in Reuss, 1846, p. 93, pl. l, figs. 1-3. Quadersandstein; Perutz, Bohemia. — stenophylla, Velenovsky, 1885, p. 15, pl. v, figs. 2, 4, 10, 16. Perucer Beds; Bohemia. Cunninghamiostrobus yubariensis, Stopes & Fujii, 1910, p. 45, pl. v. figs. 27-34, text-figs. 15, 16, 17. Upper Cretaceous: Hokkaido, Japan. Cunninghamites borealis, Heer, 1882, p. 55, pl. xxix, fig. 12. Atane Beds: Greenland. — dubius, Sternberg in Unger, 1867, p. 651, pl. ii, fig. 8. Upper Cretaceous; Austria. - elegans (Corda), Endlicher, 1847 B, p. 305. Middle Cretaceous; Boliemia. (Recorded by Heer, 1883 A, Greenland; Patoot Beds.) - elegans linearis, Hosius & von der Marck, 1880, p. 179, pl. xxxvii, Lower Senonian; Westphalia. - oxycedrus. Presl in Sternberg, 1838, p. 203, pl. xlviii, fig. 3; Cenomanian; Niederschoena, Saxony. pl. xlix, fig. 1. - planifolius, Endlicher, 1847 B, p. 305, (= Cunninghamia plani-Perucer Beds; Bohemia. folia, Corda.) --- prisca, Eichwald, 1861, p. 311. Greensand; Russia. - pulchellus, Knowlton in Stanton & Hatcher, 1905, p. 136, pl. xvi, Judith River Beds; Montana, U.S.A. fig. 1. - recurvatus, Hosius & von der Marck, 1880, p. 179, pl. xxxvii, Lower Senonian; Legden, Westphalia. figs. 143, 144. — squamosus, Heer, 1871 A, p. 9, pl. i, figs. 5-7. Senonian; Quedlinburg, Saxony.

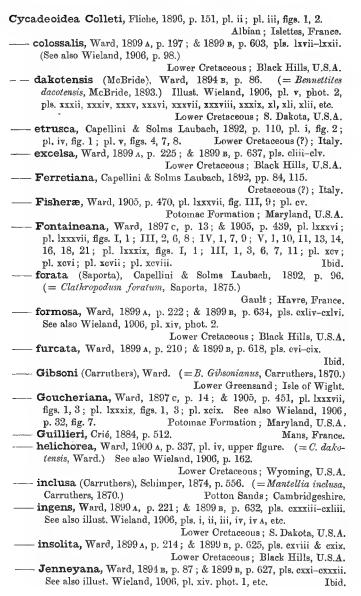


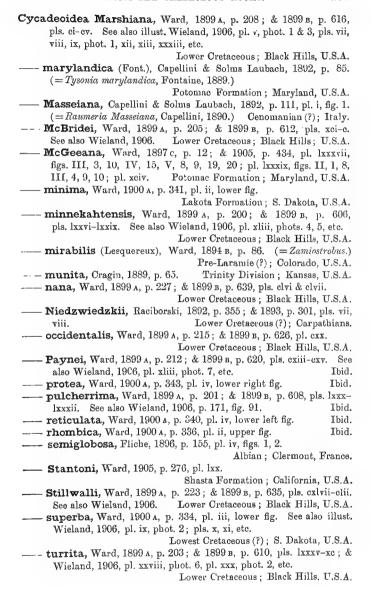
Cupressites Cookii, Newberry, 1870, p. 9 [nomen nudum].

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Amboy Clay; New Jersey, U.S.A.
   - obtusifolius, Eichwald, 1865, p. 44, pl. iii, figs. 6-7.
Cupressoxylon cheyennense, Penhallow, 1907 A, p. 238.
                                  Comanche Cretaceous; Kansas, U.S.A.
 — comanchense, Penhallow, 1907 A, p. 239.
--- Dawsoni, Penhallow, 1907 A, p. 240.
                      (Recorded in Cretaceous of Medicine Hat, Canada.)

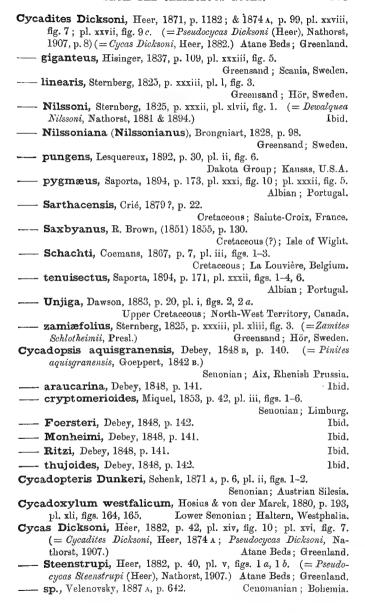
    macrocarpoides, Penhallow, 1907 A, p. 238.

                                     Cretaceous : Medicine Hat, Canada.
Cussonia? lacerata, Saporta, 1894, p. 189, pl. xxxv, fig. 3 B.
                                                      Albian; Portugal.
— partita, Velenovsky, 1882 B, p. 20, pl. vii, fig. 1. (= Cussoniphyl-
       lum partitum, Velenovsky, 1889.)
                                     Cenomanian; Hodkovic, Bohemia,
Cussoniphyllum partitum, Velenovsky, 1889, p. 22, pl. v. fig. 1.
       (= Cussonia partita, Velenovsky, 1882.)
                                                Cenomanian : Bohemia.
 Cyathea angusta, Heer, 1883 A, p. 1, pl. i, figs. 4-5.
                                               Patoot Beds: Greenland.
--- fertilis, Heer, 1882, p. 21, pl. xxxi, figs. 3-8.
                                               Atane Beds; Greenland.
— Hammeri, Heer, 1882, p. 22, pl. xxxi, figs. 1-2; pl. xxxv, figs. 4, 4b.
Cyatheites? nebraskana (Heer), Knowlton, 1898, p. 81 (re-naming
       Pecopteris nebraskana, Heer),
                                        Dakota Group; Kansas, U.S.A.
Cycadeites? Wohlfahrti (Otto), Geinitz, 1875 B, p. 232, pl. lxvi,
       figs. 3 a, b. (= Arundites Wohlfahrii, Otto, 1852).
                                     Quadersandstein; Dippoldiswalde.
Cycadeocarpus (Dioonites) columbianus, Dawson, 1873, p. 69,
       pl. i.
                                   Lower Cretaceous; British Columbia.
Cycadeoidea Argonnensis, Fliche, 1896, p. 153, pl. i, fig. 5.
                                             Albian; Clermont, France.
- arida-gamantiensis, Leriche, 1909, p. 501, text-fig. 3.
                                  Senonian; Templeux-la-Fosse, France.
---- aspera, Ward, 1899 A, p. 213; & 1899 B, p. 624, pl. exvii.
                                 Lower Cretaceous; Black Hills, U.S.A.
— Bibbinsi, Ward, 1897 c, p. 15; & 1905, p. 456, pl. lxxxiii, fig. 3;
      pl. lxxxiv, fig. 3; pl. lxxxv; pl. lxxxvii, figs. I, 2, 4, 6, 7; II, 1, 2, 4,
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      figs. I, 5; II, 2, 5, 6; pls. ci-civ.
                                 Potomac Formation ; Maryland, U.S.A.
--- cicatricula, Ward, 1899 A, p. 203; & 1899 B, p. 609, pls. lxxxiii-
                                 Lower Cretaceous; Black Hills, U.S.A.
      lxxxiv.
--- Clarkiana, Ward, 1905, p. 472, pl. lxxxix, figs. I, 2, 4; pl. evi.
                                Potomac Formation; Maryland, U.S.A.
---- Colei, Ward, 1899 A, p. 211; & 1899 B, p. 619, pls. cx-cxii.
                                 Lower Cretaceous; Black Hills, U.S.A.
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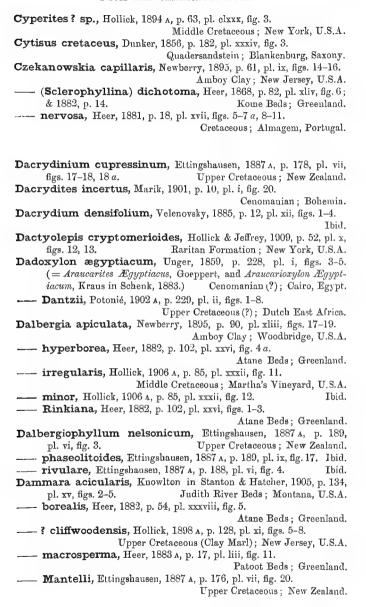




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Cycadeoidea Tysoniana, Ward, 1897 c, p. 11; & 1905, p. 432, pl. lxxxvii, figs. 1, 5; pl. xciii.
Potomac Formation; Maryland, U.S.A.
— Uhleri, Ward, 1897 c, p. 14; & 1905, p. 454, pl. lxxxvii, figs. IV, 10;
pl. c. Ibid.
—— utopiensis, Ward, 1900 A, p. 338, pl. iii, fig. 727.
Lakota Formation; Wyoming, U.S.A.
Wellsii, Ward, 1899 A, p. 199; & 1899 B, p. 605, pls. lxxiii-lxxv.
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Wielandi, Ward, 1899, p. 621, pl. cxvi. (C. Paynei, ex parte.) See
also Wieland, 1906, p. 110, etc., pls. xv, xvi, xvii, phot. 4, xxi,
xxii, etc. Ibid.
— Yatesii, Carruthers, 1867, p. 199, pl. ix. (= Yatesia Morrisii, Car-
ruthers, 1870.) Lower Greensand; Potton.
sp., Fliche, 1896, p. 157, pl. v, fig. 1. Albian (?); Clermont, France.
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Cycadeospermum acutum, Fontaine, 1889, p. 270, pl. cxxxv, fig. 12.
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- angustum, Fontaine, 1889, p. 271, pl. cxxxv, fig. 20. Ibid.
californicum, Fontaine in Ward, 1905, p. 257,-pl. lxviii, fig. 4.
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— columnare, Lesquereux, 1892, p. 31, pl. xliv, figs. 7, 8.
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Potomac Formation; Virginia, U.S.A.
—— lineatum, Lesquereux, 1892, p. 30, pl. i, fig. 14.  Dakota Group; Kansas, U.S.A.
— montanense, Fontaine in Ward, 1905, p. 310, pl. lxxiii, fig. 7.
Kootanie Formation; Montana, U.S.A.
obovaturn, Fontaine, 1889, p. 270, pl. cxxxv, fig. 13.
Potomac Formation; Virginia, U.S.A.
— rotundatum, Fontaine, 1889, p. 271, pl. cxxxvi, fig. 12. Ibid.
— Schmidtianum, Geinitz, 1879, p. 114, pl. iv, figs. 2 a, b, c.
Senonian; Silesia.
— spatulatum, Fontaine, 1889, p. 271, pl. exxxv, figs. 11, 21.
Potomac Formation; Virginia, U.S.A.
turonicum, Engelhardt, 1892, p. 94, pl. i, figs. 4, 5.
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Cycadinocarpus circularis, Newberry; Ward in Smith, 1894,
p. 348; & Newberry, 1895, p. 46, pl. xlvi, figs. 1-4.
Amboy Clay; Alabama, U.S.A.
Cycadites affinis, Eichwald, 1861, p. 311. Greensand; Russia.
cenomanensis, Crié, 1879, p. 14 [nomen nudum].
Cenomanian; France.
contiguus, Eichwald, 1865, p. 41, pl. iii, fig. 2.
Neocomian; Kursk, Russia.



Cyclopitys Delgadoi, Saporta, 1890 A, p. 814; & 1891, p. 91	
figs. 1-4. Valanginian;	Portugal.
Cyclopteris Klipsteini, Dunker, 1846, p. 11, pl. ix, fig. 7.	
Neocomian;	Duingen.
Moquensis, Newberry in Ives, 1861, p. 129, pl. iii, figs.	1, 2.
Base of Cretaceous (?); Arizo	
squamata, Ettingshausen, 1852 c, p. 13, pl. iv, fig. 1.	
Wernsdorfer Beds (see Krasser, 189	6. n. 146).
Cylindrites arteriæformis, Goeppert, 1842 A, p. 117, pl. i.	
Quadersandstei	
— conicus, Hosius & von der Marck, 1880, p. 191, pl. xl, fi	
Lower Senonian	
	; Belgium.
— Daedaleus, Goeppert, 1842 A, p. 117, pl. xlix, figs. 1, 2.	
Quadersandste	in; Silesia.
— latifrons, Saporta, 1880 (1877), p. 642, pl. i, fig. 1.	
Lower Cretaceous; Villequi	
	; pl. xlviii,
figs. 1, 2. (= Typha gigantea, Unger, 1870 A.)	
Quadersandste	in; Silesia.
spongioides (Goeppert), emend. Richter, 1909, p. 8,	pls. xi, xii,
xiii. Lower Cretaceous; Qu	
Cyparissidium cretaceum, Schenk, 1876, p. 167, pl. xxix,	
Upper Cretaceous; Brandenh	
— gracile, Heer, 1874 A, p. 74, pl. xvii, figs. 5, b, c; pl. xv	
pl. xix; pl. xx, figs. 1, d, e; pl. xxi, figs. 9 b, 10 d.	, , ,
Kome Beds :	Greenland.
? japonicum, Yokoyama, 1894, p. 229, pl. xx, figs. 3 a,	6, 6 a, 13;
pl. xxiv, fig. 4. Neocomian (	
minimum, Velenovsky, 1885, p. 19, pl. ix, figs. 6-7; pl.	x, fig. 4.
Perucer Beds; Landsberg	
— mucronatum, Heer, 1883 A, p. 12, pl. xlviii, figs. 6 c, d	, 16–17.
Patoot Beds;	
pulchellum, Velenovsky, 1885, p. 18, pl. v, figs. 3, 5, 6	
Cenomanian (?); Knezioka	
— Suessii, Schenk, 1876, p. 167, pl. xxviii, fig. 13 (Widdrin	
Upper Cretaceous; St. Wolfgan	
Cyperacites ambiguus, Ettingshausen, 1893, pp. 139, 14	
p. 13, pl. i, fig. 3. Cretaceous:	-
	, Husbinia.
Kome Beds;	Grannland
hyperboreus, Heer, 1874 A, p. 86, pl. xxiv, fig. 4.	Ibid.
	TT C! A
Montana Formation; Wyom	
- sp. (Dn.) Knowlton, 1898, p. 83 (re-naming Cyperites sp.,	
Kootanie Formation; British	
Cyperites sp., Dawson, 1893, p. 91, text-fig. 16.	Ibid.



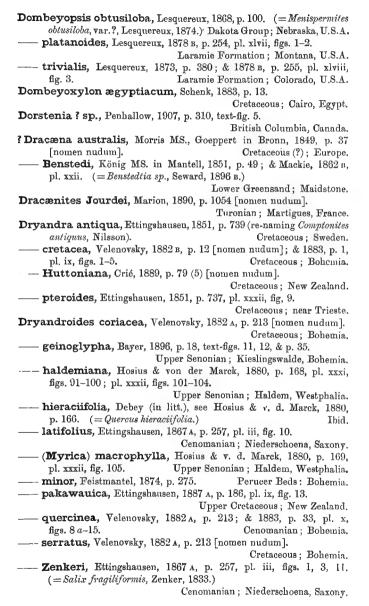
Dammara microlepis, Heer, 1882, p. 55, pl. xl, fig. 5.
Atane Beds; Greenland.
— minor, Hollick, 1906 A, p. 40, pl. ii, figs. 35-37. (= Protodammara
speciosa, Hollick & Jeffrey, 1909.)
Raritan Formation; Staten Island, U.S.A.
northportensis, Hollick, 1905 c, p. 405, pl. lxx, figs. 1-2.
Cretaceous Clay; Long Island, U.S.A.
Dammarites albens, Presl in Sternberg, 1838, p. 203, pl. lii, figs. 11,
12. Upper Cretaceous; Balkans.
— Bayeri, Zeiller, 1905, p. 338, pl. vii, figs. 8-11.
Upper Cretaceous; Bulgaria.
caudatus, Lesquereux, 1892, p. 32, pl. i, figs. 9, 10.
Dakota Group; Kansas, U.S.A.
—— crassipes, Goeppert, 1842 A, p. 122, pl. liii, fig. 3.
Senonian; Silesia.
— dubius, Dawson, 1894, p. 56, pl. vi, fig. 8.
Upper Cretaceous; Vancouver Island, Canada.
— emarginatus, Lesquereux, 1892, p. 33, pl. i, fig. 11.
Dakota Group; Kansas, U.S.A.
Dammarophyllum striatum, Velenovsky, 1889, pp. 47 & 53.
(= Podozamites striatus, Velenovsky, 1885.)
Cenomanian; Bohemia.
Danæites firmus, Heer, 1868, p. 81, pl. xliv; & 1874 a, p. 56, pl. ix,
fig. 1 a; pl. xii, figs. 1, 2. Kome Beds; Greenland.
— Schlotheimi, Debey & Ettingshausen, 1859 B, p. 202, pl. iii, fig. 1.
Senonian; Aix, Rhenish Prussia.
Daphnites Goepperti, Ettingshausen, 1867 A, p. 253, pl. ii, fig. 8.
Cenomanian; Niederschoena, Saxony.
Daphnogene cretacea, Lesquereux, 1876 B, p. 343 (substituted for
Cinnamomum Scheuchzeri, Heer, Lesquereux, 1874, p. 83, pl. xxx,
figs. 2, 3). Dakota Group; Kansas, U.S.A.
excellens, Eichwald, 1865, p. 64, pl. iii, fig. 17.
Cretaceous; Russia.
Heerii, Lesquereux, 1876 B, p. 343. (= Cinnamomum Heerii,
Lesquereux, 1859.) Dakota Group; Kansas, U.S.A.
primigenia, Ettingshausen, 1867 a, p. 252, pl. i, fig. 13; pl. iii,
fig. 15. Cenomanian; Niederschoena, Saxony.
Daphnophyllum angustifolium, Lesquereux, 1892, p. 98,
pl. xxxvi, fig. 8. Dakota Group; Kansas, U.S.A.
crassinervium, Heer, 1869 A, p. 18, pl. vii, fig. 2; pl. xi, fig. 5.
Upper Cretaceous; Moletein, Moravia,
dakotense, Lesquereux, 1892, p. 99, pl. li, figs. 1-4; pl. lii, fig. 1.
Dakota Group; Kansas, U.S.A.
ellipticum, Heer, 1869 A, p. 18, pl. vii, fig. 3.
Upper Cretaceous; Moletein, Moravia.
— Fraasii, Heer, 1869 A, p. 17, pl. vi, figs. 1, 2. Ibid.
Davallites Richardsoni, Dawson, 1883, p. 25, pl. v, figs. 18, 18 a,
18 b. Upper Cretaceous; Protection Island, Canada.

Debeya affinis, Ettingshausen, 1895, p. 46, pl. iii, figs. 21, 22.
Cretaceous; Australia.
— australiensis, Ettingshausen, 1893, pp. 137, 150; & 1895, p. 45,
pl. iii, figs. 19, 20. Cretaceous; Australia.
- serrata, Miquel, 1853, p. 38, pl. i, fig. 1. (= Phyllites Geinitzensis,
Goeppert, 1865.) Senonian; Limburg.
- sp., Roemer, 1870, p. 354, pl. xxxix, fig. 10.
Upper Cretaceous; Upper Silesia.
Delesseria Friedaui, Unger, 1850, p. 29; & 1853, p. 80, pl. xxvi, fig. 2.
Upper Cretaceous; Styria.
incrassata, Lesquereux, 1873, p. 374. (= Caulerpites incrassatus,
Knowlton, 1898.) Laramie Formation; New Mexico, U.S.A.
— lingulata, Lesquereux, 1873, p. 374. (= Caulerpites lingulatus,
Knowlton, 1898.) Ibid.
- Reichii, Engelhardt, 1892 A, p. 80. (= Halyserites Reichii, Stern-
berg.) Cenomanian; Niederschoena, Saxony.
Delessertites Hampeanus, Stiehler, 1858, p. 56, pl. xi, fig. 12.
Quadersandstein; Blankenburg, Saxony.
— Thierensi, Miquel, 1853, p. 54, pl. i, fig. 4. (= Phyllites Thierensi,
Bosquet MS., Debey, 1851.) Senonian; Limburg.
Delgadopsis rhizostigma, Saporta, 1894, p. 141, pl. xxiii, figs. 3, b-c;
pl. xxv, figs. 1-4, 9-18; pl. xxvi, fig. 2.
Urgonian; Cercal, Portugal.
Dermatophyllites acutus, Heer, 1882, p. 80, pl. xlii, fig. 7.
Atane Beds; Greenland.
— borealis, Heer, 1874 A, p. 112, pl. xxxii, figs. 8, 8 h. Ibid.
Dewalquea aquisgranensis, Saporta & Marion, 1873, p. 61, pl. viii,
figs. 5-7. Senonian; Aix, Rhenish Prussia.
coriacea, Velenovsky, 1889, p. 23, pl. iv, figs. 1-6. (=Aralia
coriacea, Velenovsky.) Cenomanian; Bohemia.
dakotensis, Lesquereux, 1892, p. 211, pl. lix, figs. 5, 6.
Dakota Group; Kansas, U.S.A.
gelindenensis, Saporta & Marion, recorded Hosius & v. d. Marck,
1880, p. 174, pl. xxxiv, fig. 124. Upper Senonian; Westphalia.
groenlandica, Heer, 1882, p. 87, pl. xxix, figs. 18-19; pl. xlii, figs. 5-6; pl. xliv, fig. 11. Atane Beds; Greenland.
8 /1 / 8
haldemiana angustifolia, Hosius & von der Marck, 1880, p. 173, pl. xxxiii, figs. 116, 117; pl. xxxiv, figs. 118-122.
Upper Senonian; Haldem, Westphalia.
— haldemiana latifolia, Hosius & von der Marck, 1880, p. 173,
pl. xxxiv, fig. 115; pl. xxxv, fig. 114. Ibid.
insignis, Hosius & von der Marck, 1880, p. 172, pl. xxxii, figs. 111-
113; pl. xxxiii, fig. 109; pl. xxxiv, fig. 110; pl. xxxv, fig. 123.
Ibid.
Nilssoni (Nilsson), Nathorst, 1881 A, p. 83; & 1894, p. 196, text-
fig. (= Cycadites Nilssoni, Sternberg, 1825.)
Greensand; Scania, Sweden.

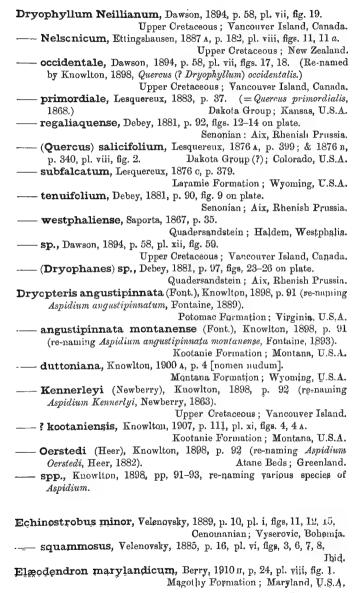
Dewalquea pentaphylla, Velenovsky, 1886, p. 14, pl. viii, figs. 11, 12. Cenomanian; Bohemia.
— primordialis, Lesquereux in Winchell, 1885, p. 77; & Lesquereux, 1895, p. 18, pl. A, fig. 10. Dakota Group; Minnesota, U.S.A. — Smithi, Berry, 1910 E, p. 36, text-fig. 1.
Tuscaloosa Formation; Alabama, U.S.A. —— trifoliata, Newberry, 1895, p. 129, pl. xxii, figs. 4-7.
Amboy Clay; Woodbridge, U.S.A.  Diceras cenomanicus, Velenovsky, 1889, p. 14, pl. ii, figs. 5–7.  Cenomanian; Vyserovic, Bohemia.
Dicksonia borealis, Heer, 1882, p. 23, pl. xliv, fig. 2.  Atane Beds; Greenland.
-— conferta, Heer, 1882, p. 23, pl. xxxv, figs. 5-7.  — groenlandica, Heer, 1882, p. 23, pl. xxxv, figs. 8-9.  — microphylla, Heer, 1878, p. 27, pl. viii, figs. 1-4.
Lower Cretaceous (?); Atyrkan, Siberia. — montanensis, Fontaine in Ward, 1905, p. 286, pl. lxxi, figs. 1-4.
Kootanie Formation; Montana, U.S.A. —— munda, Dawson, 1886, p. 11, pl. iii, figs. 5, 5 A. Mill Creek Series; Mill Creek, Canada.
— pachyphylla, Fontaine in Ward, 1905, p. 224, pl. lxv, fig. 1.  Shasta Formation; California, U.S.A.
—— pterioides, Ettingshausen, 1887 a, p. 175, pl. vii, figs. 4-6.  Upper Cretaceous; New Zealand.
— punctata (Sternberg), Heer, 1882, p. 24, pl. xlvii. (=Protopteris punctata, Sternberg.) — tosana, Yokoyama, 1894, p. 213, pl. xxv, figs. 13, 13 a.
Neocomian; Ryoseki, Japan.  Dicksoniopteris Naumanni, Nathorst, 1890, p. 11, pl. v, fig. 4.  Recorded Yokoyama, 1894, p. 214, pl. xxv, fig. 4.  Ibid.
Dicotylophyllum cerciforme, Saporta, 1894, p. 147, pl. xxvi. fig. 14. Urgonian; Cercal, Portugal.
—— corrugatum, Saporta, 1894, p. 148, pl. xxvi, fig. 16. Ibid. —— hederaceum, Saporta, 1894, p. 148, pl. xxvi, fig. 15. Ibid. —— lacerum, Saporta, 1894, p. 149, pl. xxvi, fig. 3. Ibid. Dicropteris longifolia, Pomel, 1849, p. 339. (= Baiera longifolia
(Pomel), Heer, 1876.)  Dictyophyllum Dicksoni, Heer, 1871, p. 1181; 1874 A, p. 55, pl. iii,
figs. 9, 9 b, c, d. Kome Beds; Greenland. — sp., Heer, 1878, p. 29, pl. viii, figs. 16 b, 16 c, 18.
Lower Cretaceous; Siberia.  Dictyopteris anomala, Saporta, 1891, p. 81, pl. xv, fig. 28.  Valanginian; Portugal.
infracretacea [see infracretacica], Saporta, 1894, p. 99. Ibid infracretacica (error for infracretacea), Saporta, 1894, p. 81, pl. xvi, fig. 20.
— tenella, Saporta, 1894, p. 82, pl. xv, fig. 25. Ibid.

Didymosorus comptoniæfolius, Debey, 1849, p. 299 [nomen nudum]. Senonian; Aix, Rhenish Prussia. -- comptonifolius. Debey & Ettingshausen, 1859 B. p. 186, pl. i. figs. 1-5. (=Zonopteris comptoniæfolia, Debey, 1848. = Gleichenia comptoniæfolia, Heer, 1874 A.) Ibid. --- gleichenioides, Debey & Ettingshausen, 1859 B, p. 190, pl. i, figs. 10, f. Thid. varians, Debey, 1849, p. 299; & Debey & Ettingshausen, 1859 B, p. 190, pl. i, figs. 7-9. Diemenia lancifolia, Ettingshausen, 1893, p. 149; & 1895, p. 24, Cretaceous; Australia. pl. iii, fig. 4. Dillenia sp., Otto, 1854, p. 47, pl. ix, figs. 5-7. Dippoldiswalde, Saxony. Diconites borealis, Dawson, 1883, p. 24, pl. iii, fig. 37. Lower (?) Cretaceous; North-West Territory, Canada. - Buchianus (Ett.), Bornemann, 1856, p. 57 (no descript.). (= Pterophyllum Buchianum, Ettingshausen, 1852. Recorded from American Potomac, Fontaine, 1889.) Wealden: Silesia. - Buchianus abietinus (Goeppert), Ward, 1905, p. 250, pl. lxvii, figs. 1-3 (re-naming Pterophyllum abictinum, Goeppert). Shasta Formation: California, U.S.A. - Buchianus, var. angustifolius, Fontaine, 1889, p. 185, pl. lxvii, fig. 6; pl. lxviii, fig. 4; pl. lxxi, fig. 2. Potomac Formation: Virginia, U.S.A. - Buchianus, var. obtusifolius, Fontaine, 1889, p. 184, pl. clxviii, --- Buchianus rarinervis, Fontaine, 1894, p. 264, pl. xxvii, figs. 3, Trinity Division; Texas, U.S.A. — columbianus, Dawson, 1893, p. 91. (= Cycadeospermum (Dioönites) columbianus, Dn. 1873.) Lower Cretaceous; Queen Charlotte Island, Canada. - cretosus (Reiche), Schimper, 1872, p. 211. (=Pterophyllum cretosum.) Cenomanian; Niederschoena, Saxony. - Dunkerianus (Goeppert), Miquel. Recorded Fontaine, 1894, p. 265, pl. xxxvi, fig. 12; pl. xxxvii, fig. 1. American Trinity Division. Dioscorea? cretacea, Lesquereux, 1874, p. 56, pl. xxviii, fig. 10. Dakota Group; Kansas, U.S.A. Dicspyrophyllum provectum, Velenovsky, 1889, pp. 50, 53. (=Diospyros provecta, Velenovsky, 1886.) Cenomanian; Bohemia. Diospyros ambigua, Lesquereux, 1892, p. 110. (=D. anceps, Lx., 1874, & Quercus anceps, Lx., 1868.) Dakota Group; Nebraska, U.S.A. ----- amboyensis, Berry, 1909, p. 262 (re-naming Phyllites ellipticus). Raritan Formation; New Jersey, U.S.A. \_\_\_ anceps, Lesquereux, 1874, p. 89, pl. vi, fig. 6. (= Quercus anceps, Dakota Group; Nebraska, U.S.A. Lesquereux, 1868, p. 96.)

Diospyros apiculata, Lesquereux, 1892, p. 110, pl. xiv, fig. 3.
Dakota Group; Kansas, U.S.A.
? celastroides, Lesquereux, 1892, p. 113, pl. xx, fig. 7.
Dakota Group; Kansas, U.S.A.
cretacea, Ettingshausen, 1893, pp. 138, 150; & 1895, p. 39, pl. iii,
figs. 17, 18, 24. Cretaceous; Australia.
—— eminens, Dawson, 1894, p. 62, pl. x, fig. 40.
Upper Cretaceous; Vancouver Island, Canada.
- judithæ, Knowlton in Stanton & Hatcher, 1905, p. 146, pl. xviii,
figs. 4, 5; pl. xix, fig. 3. Judith River Beds; Montana, U.S.A.
nitida, Dawson, 1883, p. 22, pl. iii, fig. 10.
Cretaceous; Peace River, North-West Territory, Canada.
— primæva, Heer in Capellini & Heer, 1867, p. 19, pl. i, figs. 6, 7.
Dakota Group; Nebraska, U.S.A.
prodromus, Heer, 1874 A, p. 113, pl. xxxii, figs. 3-7; pl. xxxiii,
fig. 6 c. Atane Beds; Greenland— provecta, Velenovsky, 1886, p. 49, pl. xxiii, figs. 1-5, 10.
(=Diospyrophyllum provectum, Velenovsky, 1889.)
Cenomanian; Bohemia.
— pseudoanceps, Lesquereux, 1892, p. 111, pl. xxii, fig. 1; & 1895,
p. 17, pl. B, fig. 6. Dakota Group; Minnesota, U.S.A.
rotundifolia, Lesquereux, 1874, p. 89, pl. xxx, fig. 1.
Dakota Group; Kansas, U.S.A.
Schweinfurthi, Heer, 1876 B, p. 6, figs. 1-10 (fruits).
Upper Cretaceous; Egypt.
Steenstrupi, Heer, 1883 a, p. 32, pl. lxiv, fig. 1.
Patoot Beds; Greenland.
vancouverensis, Dawson, 1883, p. 28, pl. viii, fig. 32.
Upper Cretaceous; Vancouver Island.
- Wodani, Unger, 1850 A, p. 435. Recorded American Laramie
Formation, Lesquereux, 1878, p. 233, pl. lix, fig. 13.
—— sp., Dawson, 1894, p. 62, pl. x, fig. 41.
Cretaceous; British Columbia, Canada.
Diphyllites membranaceus, Heer, 1883 a, p. 45, pl. lx, fig. 4 a.
Patoot Beds; Greenland.
Diplopora Mühlbergii, Lorenz, 1902, p. 52, text-figs. 3-6.
Lower Cretaceous; Switzerland.
Dipteriphyllum cretaceum (Velenovsky), Krasser, 1896, p. 123,
pl. xv, fig. 7. (= Platycerium cretaceum, Velenovsky).
Perucer Beds; Vyscrovic, Bohemia.
Discophorites angustilobus, Heer, 1877, p. 145, pl. lviii, figs. 18,
19. Neocomian; Switzerland.
Fischeri, Heer, 1877, p. 145, pl. lviii, figs. 16, 17.  Schmeiderienus Cainita 1870 - 113 line 6, 1
Schneiderianus, Geinitz, 1879, p. 113, pl. iv, fig. 1.
Neocomian (?); Caucasia.
Dombeyopsis obtusa, Lesquereux, 1873, p. 375; & 1878, p. 255,
pl. xlvii, figs. 4, 5. Laramie Formation; Colorado, U.S.A.



Drynaria astrostigmosa, Bayer, 1899, p. 9, pl. i, figs. 5, 6, text-figs. 4, 4 a. Perucer Beds; Bohemia.
— dura (Velenovsky), Bayer, 1899, p. 15, text-figs. 6, 6 a. (=Lambertia dura, Velenovsky, 1883.)
— fascia, Bayer, 1899, p. 10, text-figs. 5, 5 a.
Perucer Beds; Vyserovic, Bohemia.
tumulosa, Bayer, 1899, p. 19, pl. i, figs. 1, 1 a, 2 a, 3, 4. Ibid.
Dryophyllum Alberti-Magni, Debey, 1881, p. 89, fig. 6 on plate.
Senonian; Aix, Rhenish Prussia.
— anceps, Lesquereux, MS. Nebraska, U.S.A.
— aquamarum, Ward, 1885, p. 551, pl. xxxvii, figs. 3-5.
Laramie Formation; Wyoming, U.S.A.
aquisgranense, Debey, 1881, p. 88, fig. 1 on plate.
Senonian; Aix, Rhenish Prussia.
— basidentatum, Ward, 1885, p. 551, pl. xxxvii, fig. 11.
Laramie Formation; Wyoming, U.S.A.
— Beuthianum, Debey, 1881, p. 96, fig. 22 on plate.
Senonian; Aix, Rhenish Prussia.
— bruneri, Ward, 1887, p. 27, pl. x, figs. 5, 6.
Montana Formation; Wyoming, U.S.A.
— campteroneurum, Debey, 1881, p. 96.
Senonian; Aix, Rhenish Prussia.
crenatum, Lesquereux, 1876 A, p. 371; & 1878 B, p. 162, pl. lxii,
figs. 10, 11. Montana Formation; Wyoming, U.S.A.
Crepini, Debey, 1881, p. 94, fig. 18 on plate.
Senonian; Aix, Rhenish Prussia.
—— cretaceum, Debey, 1881, p. 88, figs. 2–5 on plate. Ibid.
Dethimusianum, Debey, 1881, p. 95, fig. 20 on plate.
Upper Cretaceous; Vancouver Island, Canada.
Eodrys, Debey, 1881, p. 94, fig. 19 on plate.
Senonian; Aix, Rhenish Prussia.
—— exiguum, Debey, 1881, p. 95, fig. 21 on plate. Ibid.
— falcatum, Ward, 1885, p. 551, pl. xxxvii, fig. 10.
Laramie Formation (?); Wyoming, U.S.A.
gracile, Debey, 1881, p. 90, figs. 10-11 on plate.
Senonian; Aix, Rhenish Prussia.
— Heeri, Debey, 1881, p. 89, figs. 7, 8 on plate. Ibid.
— (Quercus) Holmesii, Lesquereux, 1883, p. 38, pl. iv, fig. 8.
(= Quercus Holmesii, Lesquereux, 1892.)
Dakota Group (?); Colorado, U.S.A.
—— (Quercus) latifolium, Lesquereux, 1876 A, p. 393; & 1876 B,
p. 340, pl. vi, fig. 1. Dakota Group; Kansas, U.S.A.
Lerschianum, Debey, 1881, p. 93, figs. 15–16 on plate.
Senonian; Aix, Rhenish Prussia.
—— Lesquereuxii, Ettingshausen, 1893, p. 148; & 1895, p. 16, pl. i, fig. 30. Cretaceous; Australia.
fig. 30. Cretaceous; Australia.



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Elæodendron priscum, Ettingshausen, 1893, p. 150; & 1895, p. 48,
                                                 Cretaceous; Australia.
      pl. iv, fig. 6.
     speciosum, Lesquereux, 1892, p. 175, pl. xxxvi, figs. 2, 3.
                                        Dakota Group; Kansas, U.S.A.
   - strictum, Hollick, 1906 A, p. 89, pl. xxxiii, fig. 6.
                         Middle Cretaceous; Martha's Vineyard, U.S.A.
--- sp., Hollick, 1906 A, p. 89, pl. xxxiii, fig. 7.
                                       Cretaceous; Long Island, U.S.A.
                                          (=Abies oblonga, Lindley &
Elate oblonga, Unger, 1845, p. 199.
      Hutton, 1835.)
Elatoxylon Withamii?, Hartig, 1848, p. 168.
                                Quadersandstein; Quedlinburg, Saxony.
Eleoxylon cretaceum, Brongniart, 1849 A, pp. 76, 111. (=Pinus
      cretacea, Corda.)
                                                 Cretaceous; Bohemia.
Embothrites? daphneoides, Lesquereux, 1883, p. 51. (=Embo-
    thrium? daphneoides, Lesquereux, 1874.)
Embothrium? daphneoides, Lesquereux, 1874, p. 87, pl. xxx, fig. 10.
                                        Dakota Group Kansas, U.S.A.
Encephalartopsis nervosa, Fontaine, 1889, p. 174, pl. lxx, fig. 4;
      pl. lxxi, figs. 3, 4; pl. lxxii, figs. 3, 4.
                                 Potomac Formation; Virginia, U.S.A.
Encephalartos cretaceus, Lesquereux, 1892, p. 29, pl. i, fig. 12.
                                        Dakota Group; Kansas, U.S.A.
Eolirion lusitanicum, Saporta, 1894, p. 180, pl. xxxiv, figs. 2-3.
                                                    Albian; Portugal.
--- ? nervosum, Hosius & von der Marck, 1880, p. 143, pl. xxvi,
      fig. 24.
                                Upper Senonian; Haldem, Westphalia.
  — primigenium, Schenk, 1871 A, p. 20, pl. vii, fig. 4.
                                 Urgonian; Grodischt, Austrian Silesia.
                  (Recorded Heer, 1874 A, pl. xxiv, figs. 1-3, Greenland.)
----- subfalcatum, Hosius & von der Marck, 1880, p. 142, pl. xxvi,
      fig. 23.
                                         Upper Senonian; Westphalia.

    sp. ?, Hosius & von der Marck, 1880, p. 182, pl. xxxvii, fig. 150.

                                         Lower Senonian; Westphalia.
Ephedrites baccatus, Marik, 1901, p. 14, pl. ii, fig. 3.
                                                Cenomanian; Bohemia.
--- I vernonensis, Fontaine in Ward, 1905, p. 495, pl. cvii, fig. 8.
                           Lower Potomac Formation; Virginia, U.S.A.
Equisetites annularioides, Heer, 1874 A, p. 61, pl. xiii, fig. 9.
                                               Kome Beds; Greenland.
---- Burchardti, Dunker, 1846, p. 2, pl. v, fig. 7.
                             (Recorded from Urgonian of Portugal, etc.)
 — grönlandicus, Heer, 1874 л, р. 61, рl. хііі, fig. 10.
                                               Kome Beds; Greenland.
— inæqualis, Eichwald, 1861, p. 310.
                                                   Greensand; Russia.
--- notabilis, Eichwald, 1865, p. 34, pl. iv, fig. 7. Neocomian; Russia.
--- peruanus, Neumann, 1907, p. 78, pl. ii, figs. 1, 2.
                                                    Neocomian; Peru.
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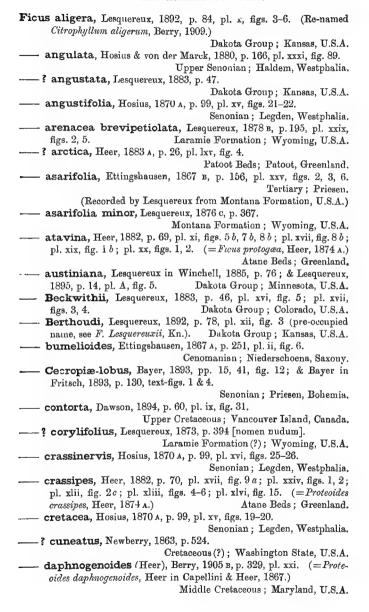
<b>Equisetites? sp.,</b> Jasche, 1858, p. 95, pl. iv, fig. 3.
Quadersandstein; Prussian Saxony.
Equisetum amissum, Heer, 1874 A, p. 60, pl. xiii, figs. 2-8; pl. xxii,
figs. 11 b, c. Kome Beds & Atane Beds; Greenland.
arenarium, Hampe, 1852, p. 7 [nomen nudum].
Quadersandstein; Blankenburg, Saxony.
Burchardti, Dunker. (=Equisetites Burchardti, Dunker, 1846.)
, -
Heerii, Schenk, 1876, p. 165, pl. xxix, fig. 1.
Upper Cretaceous; Brandenburg, Tyrol.
— Lyelli, Mantell, 1833, p. 245, text-figs. 1-3.
Wealden; Tilgate Forest.
(Recorded from American Potomac, Fontaine, 1889.)
— marylandicum, Fontaine, 1889, p. 65, pl. ii, fig. 10.
Potomac Formation; Maryland, U.S.A.
maximum, Hampe, 1852, p. 7 [nomen nudum].
Quadersandstein; Blankenburg, Saxony.
— montanense, Fontaine in Weed & Pirsson, 1898, p. 481.
Judith River Formation; Montana, U.S.A.
nodosum, Lesquereux, 1883, p. 25.
Dakota Group ; Kansas, U.S.A.
— robustum, Newberry, 1863, p. 513; & 1898, p. 15, pl. xvi, figs. 1,2.
Tertiary & Cretaceous; Washington, U.S.A.
— texense, Fontaine, 1894, p. 263, pl. xxxvi, fig. 1.
Trinity Division; Texas, U.S.A.
virginicum, Fontaine, 1889, p. 63, pl. i, figs. 1-6, 8; pl. ii, figs. 1-
3, 6, 7, 9. Potomac Formation; Virginia, U.S.A.
— Zeilleri, Richter, 1905, p. 7, pl. i, figs. 2, 12.
Quadersandstein; Quedlinburg, Saxony.
— sp.?, Fontaine, 1889, p. 65, pl. ii, fig. 8.
Potomac Formation; Virginia, U.S.A.
sp., Heer, 1874 A, p. 124, pl. xxxviii, fig. 8. Cretaceous; Spitzbergen.
Eremophyllum fimbriatum, Lesquereux, 1874, p. 107, pl. viii, fig. 1.
(=Ficus? fimbriata, Lesquereux, 1868.)
Dakota Group; Nebraska, U.S.A.
Etheridgea subglobosa, Ettingshausen, 1893, pp. 141-150; & 1895,
p. 46, pl. iv, fig. 3. Cretaceous; Australia.
Ettingshausenia cuneifolia, Stiehler, 1858, p. 67. (= Credneria
cuneifo'ia, Bronn.) Cenomanian; Niederschoena, Saxony.
— cuneiformis, Krasser, 1889, p. 34; & 1896, p. 116 [nomen nudum].
Cenomanian; Kunstadt, Moravia.
expansa, Stiehler, 1858, p. 67. (= Credneria expansa, Brongniart,
1849 A.) Cenomanian; Niederschoena, Saxony.
Geinitziana, Stiehler, 1858, p. 67. (= Credneria Reichi, Geinitz,
and C. Geinitziana, Unger.) Ibid.
— grandidentata, Stiehler, 1858, p. 67. (= Credneria grandidentata,
Unger, 1849.) Ibid.
- irregularis, Krasser, 1889, p. 34; & 1896, p. 116 [nomen nudum].
Cenomanian : Kunstadt, Moravia.

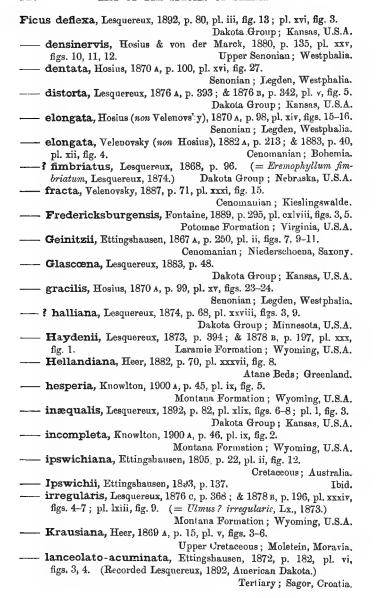
Ettingshausenia moravica, Krasser, 1896, p. 116 [nomen nudum].
Cretaceous; Moravia
pseudo-Guillelmæ, Krasser, 1889, p. 34; & 1896, p. 116 [nomen
nudum]. Cenomanian; Kunstadt, Moravia.
reticulata, Stiehler, 1858, p. 67. (= Credneria reticulata, Eichwald,
1853.) Neocomian; Kursk, Russia.
— spathulata, Stiehler, 1858, p. 67. (= Credneria spathulata, Eichwald, 1853.)  Ibid.
- Sternbergi, Stiehler, 1858, p. 67. (= Credneria Sternbergii,
Brongniart, 1849 A.) Cenomanian; Teschen, Bohemia.
— tremulæfolia, Stiehler, 1858, p. 67. (= Credneria tremulæfolia,
Brongniart, 1849 A.) Cenomanian; Niederschoena, Saxony.
venulosa, Stiehler, 1858, p. 67. (= Credneria venulosa, Eichwald,
Neocomian; Kursk, Russia.
Lower Cretaceous; Kansas, U.S.A.
Eucalyptophyllum oblongifolium, Fontaine, 1889, p. 325, pl. clxii,
fig. 4. Potomac Formation; Virginia, U.S.A.
Eucalyptus angusta, Velenovsky, 1887, p. 64, pl. xxvi, figs. 2-12.
(=E. angustus, Velenovsky, 1889, p. 21, pl. vi, fig. 1.)
Cenomanian; Vyserovic, Bohemia.
angustifolia, Newberry, 1895, p. 111, pl. xxxii, figs. 1, 6, 7.
Amboy Clay; South Amboy, New Jersey, U.S.A.
daphnogenoides, Berry.)  Ibid.
— baldemiana, Debey in Hosius & v. d. Marck, 1880, p. 174. (Mis-
print (?) for E. haldemiana.)
— borealis, Heer, 1882, p. 94, pl. xl, figs. 3, 4; pl. xlvi, fig. 14.  Atane Beds; Greenland.
— Cheffati, Saporta, 1894, p. 207, pl. xxxvii, fig. 1.
Upper Albian; Portugal. —— cretacea, Ettingshausen, 1893, p. 150; & 1895, p. 48, pl. iv, figs.
7, 8. Cretaceous; Australia.
dakotensis, Lesquereux, 1892, p. 137, pl. xxxvii, figs. 14-19.
Dakota Group; Kansas, U.S.A.
— Davidsoni, Ettingshausen, 1893, p. 150; & 1895, p. 49, pl. iv,
fig. 10. Cretaceous; Australia.
dubia, Berry (non Ettingshausen, 1887), 1905 E, p. 87, pl. lii, fig. 1.
(= Eucalyptus Wardiana, Berry, 1905 A.)
Matawan Formation; New Jersey, U.S.A.
— Geinitzi, Heer, 1882, p. 93, pl. xix, fig. 1 c; pl. xlv, figs. 4-9;
pl. xlvi, figs. 12, 13. (= Myrtophyllum Warderi, Lesquereux, 1892,
=M. Geinitzi, Heer.) Atane Beds; Greenland,
— Gouldii, Ward, 1897 A, p. 576, text-figs. 1, 2, p. 577.
Dakota Group; Kansas, U.S.A.
— haldemiana, Debey in Hosius & von der Marck, 1880, p. 174,
pl. xxxv, figs. 125-128. Upper Senonian; Westphalia.

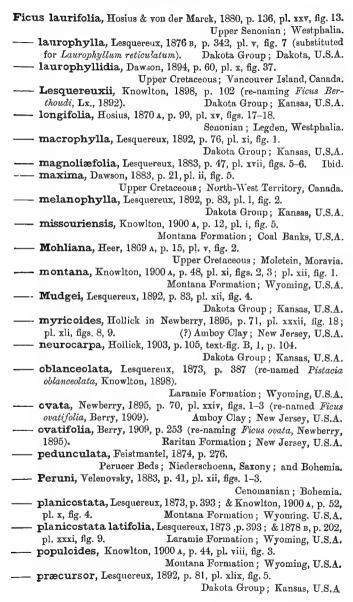
Eucalyptus latifolia, Hollick, 1906 A, p. 97, pl. xxxvi, figs. 1-5.
Middle Cretaceous; Long Island, U.S.A.
—— linearifolia, Berry, 1907, p. 203 (re-naming Eucalyptus nervosa,
Newberry). Middle Cretaceous; N. Carolina, U.S.A.
? nervosa, Newberry MS. in Hollick, 1894 A, p. 56, pl. clxxiv,
fig. 10; & in Newberry, 1895, p. 112, pl. xxxii, figs. 3, 4, 5, 8.
(= Eucalyptus linearifolia, Berry, 1907.)
Amboy Clay; Lorg Island, U.S.A.
— oxleyana, Ettingshausen, 1893, p. 150; & 1895, p. 49, pl. iv, fig. 9.
Cretaceous; Australia.
- ? parvifolia, Newberry, 1895, p. 112, pl. xxxii, figs. 9, 10.
Amboy Clay; South Amboy, New Jersey, U.S.A.
proto-Geinitzii, Saporta, 1894, p. 206, pl. xxxvi, fig. 16; pl. xxxvii,
fig. 11. Upper Albian; Portugal.
— rosieriana, Ward, 1905, p. 530, pl. cxiii, figs. 9, 10.
Older Potomac Formation; Maryland, U.S.A.
Schübleri (Heer), Hollick, 1906 A, p. 96, pl. xxxvi, fig. 6.
Middle Cretaceous; Martha's Vineyard, U.S.A.
scoliophylla, Ettingshausen, 1893, p. 150; & 1895, p. 49, pl. iv,
figs. 12, 13. Cretaceous; Australia.
— Wardiana, Berry, 1905 A, p. 47. (=Eucalyptus dubia, Berry,
1905 E, non Ettingshausen.) Middle Cretaceous; New Jersey, U.S.A.
- warraghiana, Ettingshausen, 1893, p. 150; & 1895, p. 50, pl. iv,
fig. 11. Cretaceous; Australia.
sp., Krasser, 1896, p. 116, pl. xii, fig. 3.
Cenomanian; Kunstadt, Moravia.
Eugenia primæva, Lesquereux, 1892, p. 137, pl. liii, figs. 5-9.
Dakota Group; Kansas, U.S.A.
Eugeinitzia proxima, Hollick & Jeffery, 1909, p. 43, pl. x, fig. 10;
pl. xxv, figs. 1-3. Raritan Formation; Staten Island, U.S.A.
Euonyminium Auerbachi, Mercklin, 1855, p. 23, pl. i, fig. 3; pl. iii.
Greensand; Russia.
Euphorbiophyllum antiquum, Saporta & Marion, 1885, p. 117,
text-fig. 125 c, e. Turonian; France.
— primordiale, Saporta, 1894, p. 218, pl. xxxix, fig. 23.
Cenomanian; Portugal.
Eurysacis squamosa (Heer), Schulze, 1888, p. 18. (= Cunninghamites
squamosus, Heer.) Senonian; Altenburg.
Fagophyllum nervosum, Dawson, 1894, p. 58, pl. vii, fig. 16.
Upper Cretaceous; Vancouver Island, Canada.
— retosum, Dawson, 1894, p. 57, pl. vii, fig. 15. Ibid.
Fagoxylon hokkaidense, Stopes & Fujii, 1910, pp. 64-66, pl. vii,
figs. 50-53. Upper Cretaceous; Hokkaido, Japan.
figs. 50-53. Upper Cretaceous; Hokkaido, Japan.
figs. 50-53. Upper Cretaceous; Hokkaido, Japan. Fagus cretacea, Newberry, 1870, p. 23; & 1878, pl. ii, fig. 3; & 1898,
figs. 50–53. Upper Cretaceous; Hokkaido, Japan. Fagus cretacea, Newberry, 1870, p. 23; & 1878, pl. ii, fig. 3; & 1898, pl. 68, pl. ii, fig. 3. Dakota Group; Kansas, U.S.A.
figs. 50-53. Upper Cretaceous; Hokkaido, Japan. Fagus cretacea, Newberry, 1870, p. 23; & 1878, pl. ii, fig. 3; & 1898,

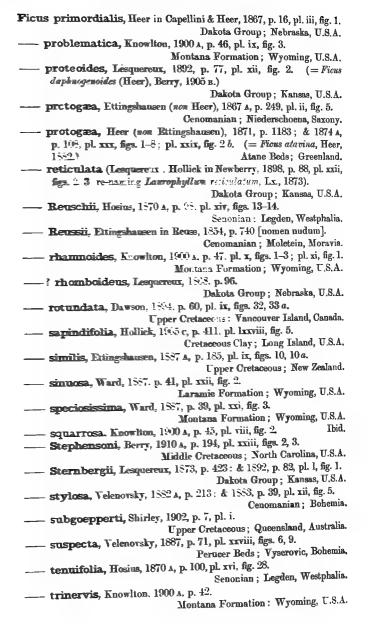
Fagus Nelsonica, Ettingshausen, 1887 A, p. 183, pl. ix, figs. 9, 9 a. Upper Cretaceous; New Zealand. --- orbiculata[-um], Lesquereux, 1892, p. 51, pl. xlvii, fig. 6. Dakota Group; Kansas, U.S.A. ---- polyclada, Lesquereux, 1868, p. 95; & 1874, p. 67, pl. v. fig. 6. Dakota Group; Nebraska, U.S.A. --- præ-ninnisiana, Ettingshausen, 1893, p. 135; & 1895, p. 21, pl. ii, figs. 1-5. Cretaceous; Australia. præ-ulmifolia, Ettingshausen, 1893, p. 137; & 1895, p. 21, pl. ii, figs. 6-8. Ibid. — prisca, Ettingshausen, 1867 A, p. 249, pl. ii, figs. 3, 3 b. Cenomanian; Niederschoena, Saxony. - producta, Ettingshausen, 1887 A, p. 183, pl. ix, fig. 1. Upper Cretaceous; New Zealand. - proto-nucifera, Dawson, 1883, p. 21, pl. ii, figs. 6 & 6 a. [Isolated leaf, and also fruit given the same name.] Cretaceous; Peace River, North-West Territory, Canada. Fasciculites ambiguus, Eichwald, 1865, p. 71, pl. v, fig. 7. Neocomian; Moscow, Russia. - grænlandicus, Heer, 1868, p. 85, pl. xliv, fig. 23. Kome Beds; Greenland. - ovata, Stenzel, 1872, p. 72 [nomen nudum]. - varians, Unger, 1850 A, p. 339. (=Palmacites varians, Corda, 1846.) Cretaceous; Bohemia. Fasciostelopteris Tansleii, Stopes & Fujii, 1910, pp. 10-15, pl. i, fig. 7; pl. ii, figs. 2, 3; text-fig. 4. Upper Cretaceous; Hokkaido, Japan. Fegonium dryandræforme, Vater, 1884, p. 838, pl. xxviii, figs. 7-10. Lower Senonian (?); Brunswick. - Schenki, Vater, 1884, p. 839, pl. xxviii, figs. 11-14. Feildeniopsis crassinervis, Fontaine, 1889, p. 205, pl. lxxxv, fig. 5. Potomac Formation; Virginia, U.S.A. Feistmantelia oblonga, Ward, 1899 B, p. 693, pl. clxix, fig. 19. Lower Cretaceous; Black Hills, U.S.A. - virginica, Fontaine in Ward, 1905, p. 484, pl. cvii, fig. 3. Older Potomac Formation; Virginia, U.S.A. Ficophyllum crassinerve, Fontaine, 1889, p. 291, pl. cxliv, fig. 3; pl. cxlv, fig. 3; pl. exlvi, fig. 1; pl. cxlvii, fig. 4; pl. exlviii, figs. 1, 2, 4; pl. clvii, fig. 4; pl. clxxiii, fig. 10. Potomac Formation; Virginia, U.S.A. eucalyptoides, Fontaine, 1889, p. 294, pl. cxliv, figs. 1-2. --- serratum, Fontaine, 1889, p. 294, pl. cxlv, fig. 2; pl. cxlix, fig. 9. Ibid. — tenuinerve, Fontaine, 1889, p. 292, pl. cxl, fig. 3; pl. cxli, fig. 2; pl. cxlv, figs. 1, 4; pl. cxlvii, fig. 2; pl. cxlix, figs. 1, 3, 5; pl. clvi, Ibid. Ficoxylon cretaceum, Schenk, 1883, p. 14, pl. v, figs. 17-19.

Cretaceous; Cairo, Egypt.



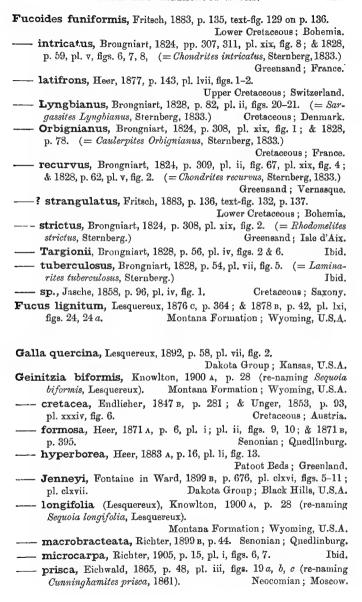






Ficus? undulata, Lesquereux, 1892, p. 84, pl. xii, fig. 5.
Dakota Group; Kansas, U.S.A.
- virginiensis, Fontaine, 1889, p. 295, pl. cxliii, figs. 1, 3; pl. cxliv,
fig. 1. Potomac Formation; Virginia, U.S.A.
Wardii, Knowlton, 1900 A, p. 48, pl. ix, fig. 1.
Montana Formation; Wyoming, U.S.A.
— Wellingtoniæ, Dawson, 1894, p. 60, pl. ix, figs. 33, 34.
Upper Cretaceous; Vancouver Island, Canada.
Willisiana, Hollick, 1894 A, p. 52, pl. clxxvi, figs. 2, 5.
Cretaceous; Long Island, U.S.A.
Woolsoni, Newberry MS., in Hollick, 1893, p. 33, pl. ii, figs. 1, 2 c;
& Newberry, 1895, p. 70, pl. xx, fig. 3; pl. xxiii, figs. 1-6.
Amboy Clay; New York, U.S.A.
Filicites sp., Nilsson, 1824, p. 146, pl. ii, figs. 1-3. Greensand; Sweden.
Fittonia squamata, Carruthers, 1870, p. 690, pl. lvi. (= Clathraria
anomala, in part, Mantell, 1847.)
Upper Cretaceous (?); Isle of Wight.
Flabellaria chamæropifolia, Goeppert, 1836, p. 426; & 1842 A, p. 120,
pl. lii, figs. 1-3. Senonian; Silesia.
— coryphæfolia, Goeppert (probably error for F. chamæropifolia),
1836, p. 87.
longirachis, Unger, 1850 A, p. 332; & 1853, p. 91, pl. xxxi, fig. 1;
pl. xxxii, fig. 1. Cretaceous; Austria.
- magothiensis, Berry, 1905 c, p. 32, text-figs. 1, 2.
Magothy Formation; Maryland, U.S.A. ——? minima, Lesquereux, 1874, p. 56, pl. xxx, fig. 12.
Dakota Group; Kansas, U.S.A.
— sub-longirachis, Ettingshausen, 1887 A, p. 181, pl. viii, figs. 4, 4 a.
Upper Cretaceous; New Zealand.
Folium arcuatum, Velenovsky, 1882 A, p. 214 [nomen nudum].
Cretaceous; Bohemia.
Cretaceous; Bohemia.
Cretaceous; Bohemia.  — daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  — lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum]. Ibid.
Cretaceous; Bohemia.  — daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  — lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  — lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  Ibid.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  libid.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  productum, Velenovsky, 1882 A, p. 214 [nomen nudum].  Ibid.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  libid.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  productum, Velenovsky, 1882 A, p. 214 [nomen nudum].  ranunculus, Velenovsky, 1882 A, p. 214 [nomen nudum].  Ibid.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  libid.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  libid.  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  productum, Velenovsky, 1882 A, p. 214 [nomen nudum].  ranunculus, Velenovsky, 1882 A, p. 214 [nomen nudum].  Tibid.  Fontainea grandifolia, Newberry, 1895, p. 96, pl. xlv, figs. 1-4.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lidd.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lidd.  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  productum, Velenovsky, 1882 A, p. 214 [nomen nudum].  ranunculus, Velenovsky, 1882 A, p. 214 [nomen nudum].  Fontainea grandifolia, Newberry, 1895, p. 96, pl. xlv, figs. 1–4.  Amboy Clay; Woodbridge, U.S.A.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lid.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lid.  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  productum, Velenovsky, 1882 A, p. 214 [nomen nudum].  ranunculus, Velenovsky, 1882 A, p. 214 [nomen nudum].  Fontainea grandifolia, Newberry, 1895, p. 96, pl. xlv, figs. 1-4.  Amboy Clay; Woodbridge, U.S.A.  Fraxinus præcox, Heer, 1883 A, p. 33, pl. lxiv, fig. 2.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  libid.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  productum, Velenovsky, 1882 A, p. 214 [nomen nudum].  ranunculus, Velenovsky, 1882 A, p. 214 [nomen nudum].  Fontainea grandifolia, Newberry, 1895, p. 96, pl. xlv, figs. 1-4.  Amboy Clay; Woodbridge, U.S.A.  Fraxinus præcox, Heer, 1883 A, p. 33, pl. lxiv, fig. 2.  Patoot Beds; Greenland.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  libid.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum]. Ibid.  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum]. Ibid.  productum, Velenovsky, 1882 A, p. 214 [nomen nudum]. Ibid.  ranunculus, Velenovsky, 1882 A, p. 214 [nomen nudum]. Ibid.  Fontainea grandifolia, Newberry, 1895, p. 96, pl. xlv, figs. 1-4.  Amboy Clay; Woodbridge, U.S.A.  Fraxinus præcox, Heer, 1883 A, p. 33, pl. lxiv, fig. 2.  Patoot Beds; Greenland.  Frenelites Reichii, Ettingshausen, 1867 A, p. 246, pl. i, figs. 10 \alpha-10 c.
Cretaceous; Bohemia.  daphnophyllum, Velenovsky, 1882 A, p. 214 [nomen nudum].  libid.  lanceolatum, Velenovsky, 1882 A, p. 214 [nomen nudum].  lingua, Velenovsky, 1882 A, p. 214 [nomen nudum].  productum, Velenovsky, 1882 A, p. 214 [nomen nudum].  ranunculus, Velenovsky, 1882 A, p. 214 [nomen nudum].  Fontainea grandifolia, Newberry, 1895, p. 96, pl. xlv, figs. 1-4.  Amboy Clay; Woodbridge, U.S.A.  Fraxinus præcox, Heer, 1883 A, p. 33, pl. lxiv, fig. 2.  Patoot Beds; Greenland.

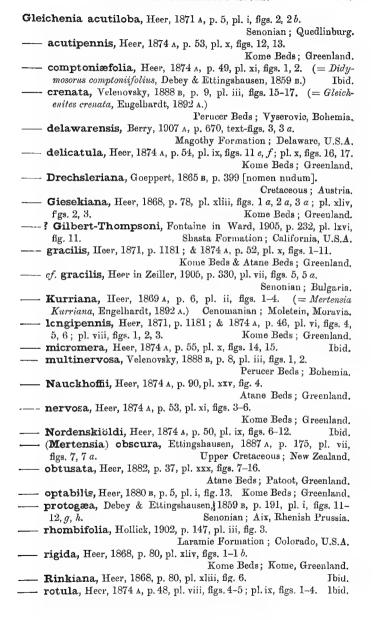
Frenelopsis bohemica, Velenovsky, 1888 A, p. 590, pl. (unnumb.), figs. 1-3, 10; & 1889, p. 13, pl. ii, figs. 3, 4. Cenomanian; Vyserovic, Bohemia. --- gracilis, Newberry, 1895, p. 59, pl. xii, figs. 1-3 a. Amboy Clay; New Jersey, U.S.A. — Hoheneggeri (Ett.), Schenk, 1871 A, p. 13, pl. iv, figs. 5-7; pl. v. figs. 1, 2; pl. vi, figs. 1-6; pl. vii, fig. 1. (Recorded Heer from Greenland, 1874.) Wernsdorfer Beds; Carpathians. - Konigii, Hosius & von der Marck, 1880, p. 132, pl. xxxvii, fig. 148. (= Calamitopsis Königi, v. d. Marck, 1864.) Upper Senonian; Westphalia. ---- leptoclada, Saporta, 1894, p. 109, p. 113, pl. xix, fig. 18; pl. xxi, Neocomian (? Aptian); Portugal. figs. 9-11. — occidentalis, Heer, 1881, p. 21, pl. xii, figs. 3 b, 4-7. Cretaceous; Portugal. --- parceramosa, Fontaine, 1889, p. 218, pl. cxi, figs. 1-5; pl. cxii, figs. 1-5; pl. claviii, fig. 1. Potomac Formation; Virginia, U.S.A. - ramosissima, Fontaine, 1889, p. 215, pls. xcv-xcix; pl. c, figs. 1-3; pl. ci, fig. 1. varians, Fontaine, 1894, p. 273, pl. xl, figs. 1, 2; pl. xli, figs. 1-3 a. Trinity Division; Texas, U.S.A. Fritschia nobilis, Velenovsky, 1885, p. 8, pl. iii, figs. 1-3, 6, 11. Pläner; Bohemia. Fucoides æqualis, Brongniart, 1824, pp. 307, 310, pl. xix, fig. 7; & 1828, p. 58, pl. v, fig. 4. (= Chondrites æqualis, Sternberg, 1833.) Greensand; Vernasque. - Brardii, Brongniart, 1828, p. 77, pl. ii, figs. 8-19 (synonym for Carpolithes hemlocinus?, Schlotheim). (= Caulerpites Brardii, Sternberg, 1833.) Cretaceous; France. - Brongniarti, Mantell (non Harlan), 1829, p. 204. Chalk; Sussex. --- caniculatus, d'Archiac, 1837, p. 159. Lower Greensand; France. --- cauliformis, Fritsch, 1883, p. 136, text-fig. 131, p. 137. Lower Cretaceous; Chorousek, Bohemia. -? columnaris, Fritsch, 1883, p. 135, text-fig. 130, p. 137. --- cylindricus, Sternberg, 1825, p. vii, pl. Ixviii, fig. 1. Quadersandstein; Bohemia. - dichotomus, Reich, in litt. (= Haliserites Reichii, Sternberg, 1833.) --- ? dichotomus, Fritsch (non Morris nec Reich), 1889, p. 119, textfig. 167. Turonian (?); Koschlitz, Bohemia. difformis, Brongniart, 1824, pp. 307, 310, pl. xix, fig. 6; & 1828, p. 57, pl. v, fig. 5. (= Chondrites difformis, Sternberg, 1833.) Cretaceous (?); Bayonne. —— friburgensis, Heer, 1877, p. 143, pl. lvii, fig. 3. Neocomian; Switzerland. --- furcatus, Brongniart, 1824, p. 309, pl. xix, fig. 3; & 1828, p. 62, pl. v, fig. 1. (= Chondrites furcatus, Sternberg, 1833.) Cretaceous; Vernasque.

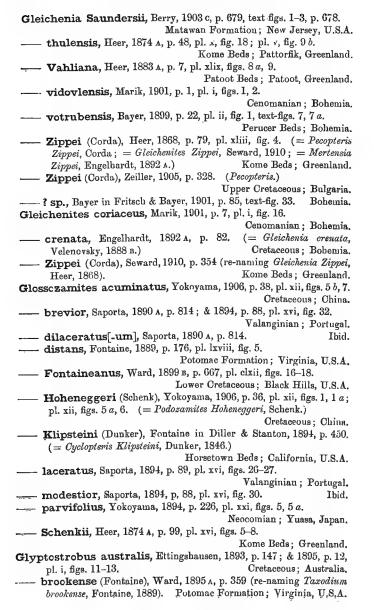


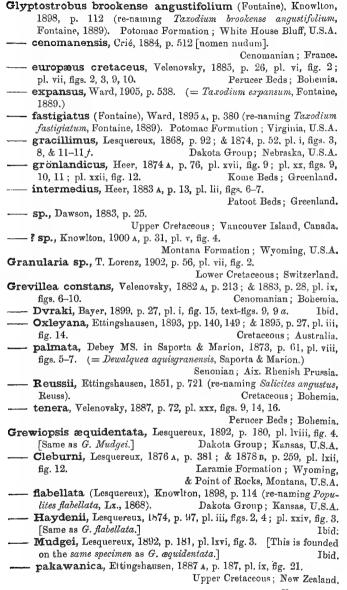
Geinitzia Reichenbachi (Geinitz), Hollick & Jeffrey, 1909, p. 38, pl. v. figs. 7-10; pl. viii, figs. 3, 4; pl. xvi, figs. 2-4; pl. xvii, figs. 1-4; pl. xviii, figs. 1-4. (= Araucarites Reichenbachi, Geinitz, 1842; = Sequoia Reichenbachi, Heer, 1868.) Raritan Formation; Staten Island, U.S.A. --- sp., Hollick & Jeffrey, 1909, p. 42, pl. viii, figs. 5, 6; pl. xviii, figs. 5, 6; pl. xix, figs. 1, 2. Ibid. - sp., Newberry, 1873, p. 10. (= Geinitzia formosa, Heer.) Cretaceous : New Jersey, U.S.A. Gelidinium trajectomosanum, Debey & Ettingshausen, 1859 A. p. 199, pl. iii, fig. 6 h. Senonian; Maestricht, Geonomites tenuirachis, Lesquereux, 1878 B, p. 117, pl. xi, fig. 1. Laramie Formation; New Mexico, U.S.A. --- Ungeri, Lesquereux, 1878 B, p. 118, pl. xi, fig. 2. Ibid. Ginkgo? acetaria, Ward, 1905, p. 551, pl. eviii, fig. 12. Older Potomac Formation; Maryland, U.S.A. — arctica, Heer, 1874 c, p. 261, pl. 807, fig. 7. (= Baiera arctica. Kome Beds : Greenland. - Baynesiana (Dawson), Knowlton, 1898, p. 110 (re-naming Salisburia Baynesiana, Dn., 1883). Upper Cretaceous; Vancouver Island. — Jaccardi, Heer, 1877, p. 146, pl. lviii, fig. 20. Lower Aptian; Switzerland. — laramiensis, Ward, 1885, p. 496, fig. 7. Montana Formation; Wyoming, U.S.A. --- lepida, Heer, 1876, p. 62, pl. xii; pl. vii, fig. 7. Kootanie Formation; British Columbia. ---- multinervis, Heer, 1882, p. 46, pl. v, fig. 1 d; pl. viii, figs. 2 b, 3, 4; pl. ix, fig. 3 b. Atane Beds; Greenland. - nana (Dawson), Knowlton, 1898, p. 111 (re-naming Salisburia Kootanie Formation; British Columbia. nana, Dn., 1886). — primordialis, Heer, 1874 c, p. 261, pl. 807, figs. 8, 9, 10. Atane Beds; Greenland. -- pusilla (Dawson), Knowlton, 1898, p. 111 (re-naming Salisburia pusilla, Dn., 1894.) [Knowlton's name invalidated by Heer's Jurassic species, Heer, 1876 c, p. 61.] Upper Cretaceous; Vancouver Island. —— **sibirica**, Heer, 1876 c, p. 61, pl. vii, fig. 6; pl. ix, fig. 5f; pl. xi. Jurassic, recorded from Kootanie Formation, British Columbia. — tenuestriata, Heer, 1882, p. 14, pl. ii, fig. 12 a. Kome Beds; Greenland. --- sp. (nuts of), Dawson, 1886, p. 9, pl. ii, fig. 4. Kootanie Formation; British Columbia, Canada. Ginkgocladus Novæ Zeelandiæ, Ettingshausen, 1887 A, p. 179, Upper Cretaceous; New Zealand. pl. vii, fig. 19.

Gleditsiophyllum triacanthoides, Berry, 1910 A, p. 197.

Middle Cretaceous; North Carolina, U.S.A.

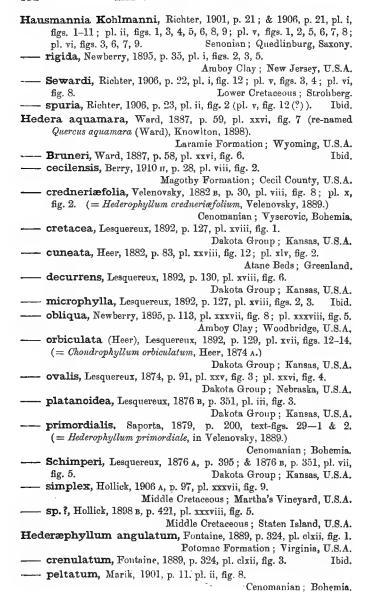






Grewiopsis paliurifolia, Ward, 1887, p. 92, pl. lvi, fig. 3.  Laramie Formation; Wyoming, U.S.A.
— viburnifolia, Ward, 1887, p. 89, pl. xl, fig. 2; & recorded Hollick, 1894 A, p. 59, pl. clxxiv, fig. 8. Cretaceous; Long Island, U.S.A.
Guatteria cretacea, Hollick, 1906 A, p. 73, pl. xxi, figs. 1-4.  Middle Cretaceous; Martha's Vineyard, U.S.A.
Gyminda primordialis, Hollick, 1906 A, p. 88, pl. xxxiii, fig. 5. Ibid. Gymnogramme bohemica, Bayer, 1899, p. 45, pl. ii, fig. 2, text-figs. 14, 14 a. Perucer Beds; Bohemia.  Haydenii, Lesquereux, 1872, p. 295; & 1878, p. 59, pl. v, figs. 1-3.  Laramie Formation; Wyoming, U.S.A.
Gyrochorte porrecta, De Stefani, 1881, p. 281. Upper Cretaceous; Italy.
Gyrolithes Davreuxi, Saporta, 1884, p. 27, pl. v, figs. 1-4'; pl. vi, figs. 1, 2.  Greensand; France.
Gyrophyllites angustifolius, Heer, 1865, p. 190, text-fig. 100 b.  Cretaceous; Switzerland.
Cretaceous; Switzerland.  — Doblhoffli, Lorenz, 1901, p. 579, pl. iv, fig. 11. Flysch; Austria.  — Kastneri, Lorenz, 1901, p. 579, pl. iv, figs. 5, 7–8. Ibid.  — Kwassizensis, Glocker, 1841, p. 322, text-fig.  — Obtusifolius, Heer, 1865, p. 190, text-fig. 101; & 1877, p. 144, pl. lviii, fig. 13. Cretaceous; Switzerland.  — Oosteri, Heer, 1865, p. 190, text-fig. 100 a; & 1877, p. 144, pl. lviii, fig. 14. Neocomian; Switzerland.  — pentamerus, Heer, 1865, p. 190, text-fig. 102; & 1877, p. 144, pl. lviii, fig. 15. Ibid.  — Petteri, Lorenz, 1901, p. 579, pl. iv, figs. 9–10. Flysch; Austria.  — quassazensis, Glocker in Goeppert, 1865 c, p. 12. (= Gyrophyllites Kwassizensis, Glocker, 1841.)  — vestanensis, Squinabol, 1890, p. 189, pl. xi, fig. 2. Cretaceous (?); Italy.
Haastia speciosa, Ettingshausen, 1887 A, p. 180, pl. viii, fig. 5.  Upper Cretaceous; New Zealand.
Halimeda Fuggeri, Lorenz, 1897, p. 177, pl. i. Flysch; Salzburg.  Haliserites contortuplicatus, von der Marck, 1864, p. 81, pl. xiii, fig. 13. Upper Cretaceous; Westphalia.  — gracilis, Debey & Ettingshausen, 1859 A, p. 189, pl. i, figs. 1-2. Senonian; Aix, Rhenish Prussia.
- Reichii, Sternberg, 1833, p. 34, pl. xxiv, fig. 7. (= Fucoides dichotomus, Reich in litt.) Greensand; Freiberg Schlotheimi, Debey, 1849, p. 299 [nomen nudum].
Senonian; Aix, Rhenish Prussia.

Halymenites cylindricus, Sternberg, 1825, pl. xlviii, fig. 1	l.
(= Münsteria cylindrica, Otto.) Quadorsandstein; Bohemia	ì.
—— major, Lesquereux, 1873, p. 373; & 1878 B, p. 38, pl. i, figs. 7, 8.	
Montana Formation (& above); U.S.A	L.
Rioana, Zigno, 1864, p. 525 [nomen nudum]. Cretaceous (?); Italy	y.
striatus, Lesquereux, 1873, p. 373; & 1878 B, p. 37, pl. i, fig. 6.	
Laramie Formation; New Mexico, U.S.A	١.
verticillatus, Münster (in litt.), Sternberg. 1838, p. 104.	
Cretaceous ; Westphalia	
Halyserites gracilis, Debey & Ettingshausen, 1859 A, p. 189, pl.	
figs. 1, 2. Senonian; Aix, Rhenish Prussia	
— Reichii (Sternberg), Unger, 1850 A, p. 10. (= Haliserites Reichi	ı,
Sternberg, = Delesseria Reichii, Engelhardt, 1892 A.)	
Senonian; Aix, Rhenish Prussia	
— Schlotheimi, Debey, 1848 (?); & 1850, p. 116. Ibid trifidus. Debey, 1848 A. p. 114.	
,,,,	
Hamamelidoxylon Renaulti, Lignier, 1907, p. 301, pl. xix, fig. 44	
pl. xx, figs. 45-52; pl. xxi, fig. 68; pl. xxiii, figs. 85, 93; text-fig 3-5, pp. 294-296. Cenomanian; Franc	
Hamamelites? cordatus, Lesquereux, 1883, p. 71, pl. iv, fig. 3.	0.
Dakota Group; Kansas, U.S.A	A
kansaseana, Lesquereux, 1876, p. 355, pl. vii, fig. 4. (= I	
kansaseanus, 1883, = Alnus kanseana, 1874, re-named by Knowlton	
1898, Quercus kanseana.) Ibio	
- quadrangularis, Lesquereux, 1876 B, p. 355. (= Alnites quadran	12-
gularis, Lx., 1874, & Fopulites quadrangularis. Lx., 1868.)	d.
— quercifolius, Lesquereux, 1883, p. 71.	d.
— tenuinervis, Lesquereux, 1883, p. 70.	
Hausmannia? arctica (Heer), Richter, 1906, p. 20. (= Jeanpaule	
arctica & Jeanpaulia borealis, Heer, 1874 A.) Urgonian; Greenland	d.
- ? Brongniarti (Debey & Ettingshausen), Richter, 1906, p. 19	
pl. vii, fig. 23. (= Asplenium Brongniarti, Debey & Ettingshauser	
1859 B.) Senonian; Quedlinburg, Saxon	у.
? californica, Fontaine in Ward, 1905, p. 228, pl. lxv, fig. 47.  Shasta Formation; California, U.S.	A
? cordata (Heer), Richter, 1906, p. 24, pl. vii, fig. 19. (= Protection)	
rhipis cordata, Heer, 1882.) Kome Beds; Greenland	
- cretacea (Velenovsky), Richter, 1906, p. 20. (= Platyceriphyllu	
cretaceum, Velenovsky, 1889.) Cenomanian; Bohemi	
— dichotoma, Dunker, 1846, p. 12, pl. v, fig. 1; pl. vi, fig. 12.	
Recorded from Senonian, Quedlinburg, by Richter, 190	6.
dichotoma euryphylla, Richter, 1906, p. 19, pl. iii, fig. 11	
pl. iv, figs. 2, 4, 5, 7; pl. vi, fig. 2. Senonian; Quedlinburg, Saxon	у.
dichotema linearis, Richter, 1906, p. 19, pl. iii, figs. 5, 8; pl. i	
figs. 6, 9, 9 a. Ibid	d,
— dichotoma regularis, Richter, 1906, p. 19, pl. iii, figs. 3, 4, 6, 10	
pl. iv, figs. 1, 8; pl. v, figs. 9, 10; pl. vi, fig. 5.	
— gracillima, Richter, 1906, p. 19, pl. iii, figs. 12, 12 a. 1bid	d.



- Hederophyllum credneriæfolium, Velenovsky, 1889, pp. 50, 54. (= Hedera credneriæfolia, Velenovsky, 1882 g.)
- --- primordiale (Saporta), Velenovsky, 1889, pp. 50, 54. (= Hedera primordialis, Saporta, 1879.)

Heterofilicites anceps, Berry, 1906 E, p. 154, pl. xxvi.

Magothy Formation; New Jersey, U.S.A.

- Hexagonaria senonica, Deecke, 1901, p. 473. Senonian; Rügen.
- Himantites alopecarus, Debey & Ettingshausen, 1859 A, p. 212, pl. iii, fig. 1 α.
  Senonian; Aix, Rhenish Prussia.
- Hymenæa dakotana, Lesquereux, 1892, p. 145, pl. lv, figs. 2, 3; pl. lvi, figs. 1, 2; pl. lxii, fig. 2. Dakota Group; Kansas, U.S.A.
- elongata, Velenovsky, 1882 a, p. 214; & 1886, p. 57, pl. xx, figs. 3, 5.
  Cenomanian; Bohemia.
- inæqualis, Velenovsky, 1886, p. 56, pl. xxi, figs. 5, 6. (= Hymenæophyllum inæqualis, Velenovsky, 1889.)
- Kuchlensis, Velenovsky, 1882 A, p. 214 [nomen nudum]. Ibid.
- latifolia, Velenovsky, 1882 A, p. 214 [nomen nudum]. Ibid.
- ---- primigenia [spelt Hymenea], Saporta, 1879, p. 199, text-fig. 28, 2; also Velenovsky, 1886, p. 56, pl. xx, fig. 4; pl. vi, figs. 1-4.
  Thid
- -- virginiensis, Fontaine, 1889, p. 320, pl. clxiii, fig. 6.

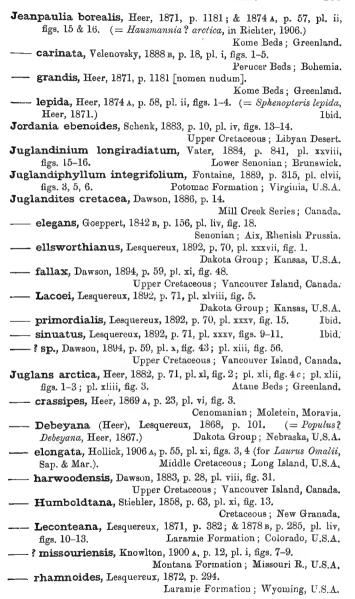
Potomac Formation; Virginia, U.S.A.

- Hymenæophyllum inæquale, Velenovsky, 1889, p. 51. (= Hymenæa inæqualis, Velenovsky, 1886.)
- Hymencphyllites heterophyllus, Unger, 1850 A, p. 527; & 1867, p. 650, pl. ii, figs. 3, 4. Upper Cretaceous; Austria.
- macrcphyllus, Goeppert, 1836, p. 262; & Unger, 1867, p. 650, pl. ii, fig. 5.
- Hymenophyllum cretaceum, Lesquereux, 1873, p. 421; & 1874, p. 45, pl. i, figs. 3-4; pl. xxix, fig. 6.
  - Dakota Group; Kansas, U.S.A.
- Hymencpteris psilotoides, Stokes & Webb, 1824, p. 424, pl. xlvi, fig. 7; pl. xlvii, fig. 2; Mantell, 1827, p. 55, pl. i, fig. 3; pl. iii, fig. 7; pl. iii\*, fig. 2; pl. xx, figs. 1, 2. (= Sphenopteris Mantelli, Brongmart, 1828.)

  Wealden, Sussex.
- Hypoglossidium antiquum, Heer, 1874 A, p. 129, pl. xxxviii, figs. 14, 15. Cretaceous; Spitzbergen.
- Hysterites dubius, Debey & Ettingshausen, 1859 A, p. 213, pl. iii, fig. 5 d. Senonian; Aix, Rhenish Prussia.
- protogæus (Heer), Meschinelli, 1892, p. 774. (= Hysterium protogæum, Heer, 1882.)
- Hysterium prctogæum, Heer, 1882, p. 20, pl. xxiv, figs. 9, 9 b. (= Hysterites protogæus, Meschinelli, 1892.)
  - Atane Beds; Greenland.
- Ilex amboyensis (Newberry), Berry, 1909, p. 259 (re-naming Ilex ovata, Newberry, 1896.) Raritan Formation; New Jersey, U.S.A.

Ilex antiqua, Heer, 1882, p. 97, pl. xxvii, fig. 1 a. Atane Beds; Greenland. ---- armata, Lesquereux, 1892, p. 176, pl. xxix, fig. 8. Dakota Group ; Kansas, U.S.A. — borealis, Heer, 1883 A, p. 39, pl. lxiv, figs. 3, 4. Patoot Beds; Greenland. — dakotensis, Lesquereux, 1892, p. 178, pl. xxix, fig. 11. Dakota Group; Kansas, U.S.A. ---- ? elongata, Newberry, 1895, p. 98, pl. xviii, figs. 1, 5. Amboy Clay; Sayreville, U.S.A. -- Masoni, Lesquereux, 1892, p. 179, pl. vii, fig. 6; pl. lxiii, fig. 6. Dakota Group; Kansas, U.S.A. ---- ? ovata, Newberry, 1895, p. 98, pl. xviii, fig. 2 (re-named Rex amboyensis, Berry, 1909.) Amboy Clay; Sayreville, U.S.A. — papillosa, Lesquereux, 1892, p. 177, pl. xxix, figs. 9, 10; pl. lviii, Dakota Group; Kansas, U.S.A. fig. 3. --- patootensis, Heer, 1883 A, p. 40, pl. lxiv, fig. 5. Patoot Beds; Greenland. --- Perneri, Bayer, 1893, pp. 20 & 42, fig. 14; & Bayer in Fritsch, 1893, p. 131, text-fig. 190. Senonian; Priesen, Bohemia, - Scudderi, Lesquereux, 1892, p. 178, pl. lviii, fig. 2. Dakota Group; Kansas, U.S.A. ---- strangulata, Lesquereux, 1876 A, p. 399; & 1876 B, p. 359, pl. viii, Dakota Group (?); Colorado, U.S.A. Illicium deletum, Velenovsky, 1886, p. 51, pl. xviii, fig. 5. Cenomanian; Bohemia. Inga Cottai, Ettingshausen, 1867 A, p. 262, pl. iii, fig. 18. Cenomanian; Niederschoena, Saxony. --- cretacea, Lesquereux, 1892, p. 153, pl. lv, fig. 11. Dakota Group; Kansas, U.S.A. ---- latifolia, Velenovsky, 1886, p. 55, pl. xx, figs. 6, 7. Cenomanian; Vyserovic, Bohemia. Inolepis affinis, Heer, 1883 A, p. 11, pl. liii, figs. 2, 2 b. Patoot Beds; Greenland. ---- bohemica, Marik, 1901, p. 8, pl. i, fig. 19. Cenomanian; Bohemia, --- imbricata, Heer, 1874 A, p. 72, pl. xvi, figs. 12-16; pl. xxiii, figs. 6c, Kome Beds; Greenland Isoetes Choffati, Saporta, 1894, p. 134, pl. xxiv, figs. 2 b, 9-11; pl. xxv, figs. 5-8; pl. xxvii, fig. 6. Urgonian; Portugal. Isoetopsis Choffati, Saporta, 1891, p. 250 [nomen nudum]. Albian; Portugal.

Jeanpaulia arctica, Heer, 1874 A, p. 131, pl. ii, figs. 15 & 16, name in pl. descr. given to J. borcalis. (= Hausmannia? arctica, in Richter, 1906.)



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Juglans rugosus, Lesquereux, 1868, p. 206; & 1878 B, p. 286, pl. liv,
      figs. 4, 5; pl. lv, figs. 1-9; pl. lvi, figs. 1, 2.
                                 Laramie Formation; Wyoming, U.S.A.
Jugloxylon hamaoanum, Stopes & Fujii, 1910, pp. 62-63, pl. vii,
                                   Upper Cretaceous; Hokkaido, Japan.
       fig. 48.
Jungermannites vetustior, Saporta, 1894, p. 123, pl. xxiii, fig. 14.
                                            Urgonian; Cercal, Portugal.
Juniperus hypnoides, Heer, 1882, p. 47, pl. xliv, figs. 3-4; pl. xlvi,
      fig. 18.
                                               Atane Beds; Greenland.
   macilenta, Heer, 1882, p. 47, pl. xxxv, figs. 10-11.
Juranyia hemiflabellata, Tuzson, 1908, p. 1, pl. i, figs. 1, 2; pl. ii,
      fig. 3.
                                           Upper Cretaceous; Hungary.
Kaidacarpium cretaceum, Heer, 1883 A, p. 19, pl. lxiv, fig. 9 b.
                                               Patoot Beds; Greenland.
Kaidacarpum Bucklandi (Lindley & Hutton), Carruthers, 1868,
      p. 156, pl. ix, fig. 2.
                                          Upper Greensand; Wiltshire.

    minus, Carruthers, 1868, p. 156.

                                             Potton Sands; Cambridge.
Kalmia Brittoniana, Hollick, 1893, p. 34, pl. ii, figs. 6, 7, 8.
                                         Cretaceous; New York, U.S.A.
Keckia ambigua, Eichwald, 1865, p. 11, pl. iv, figs. 14, 15.
                                                   Neocomian; Russia.
  — annulata, Glocker, 1841, p. 319, pl. iv. (= Münsteria annulata,
      Unger.)
                                             Quadersandstein; Austria.
--- cylindrica, Otto, 1852, p. 5, pl. ii; pl. iii; pl. iv, fig. 2.
                             Lower Quadersandsteiu; Wendischcarsdorf.
--- nodulosa, Otto, 1852, p. 9, pl. iv, figs. 3, 6, 7.
                                                                  Ibid.
vesiculosa, Otto, 1852, p. 8, pl. iv, fig. 1.
                                                                  Ibid.
--- sp., Lorenz, 1902, p. 23, pl. viii, fig. 3.
                                        Lower Cretaceous; Switzerland.
Kingthiophyllum primævum, Crié, 1889, p. 15 [nomen nudum].
                                              Cretaceous; New Zealand.
Kirchnera arctica (Heer), Velenovsky, 1888 B, p. 16, pl. ii, figs. 12-16.
                                               Perucer Beds; Bohemia.
 — dentata, Velenovsky, 1888 B, p. 18, pl. ii, figs. 1,2.
Kloedenia quercoides, Goeppert, 1839, p. 521, pl. viii B, figs. 1, 3, 4.
                                                    Cretaceous; Silesia.
Knightiophyllum primævum, Ettingshausen, 1887 A, p. 185, pl. ix,
      fig. 12.
                                       Upper Cretaceous; New Zealand.
Kohlmannopteris insignis, Richter, 1899 A, p. 40 [nomen nudum];
      & 1901, p. 20.
                                                Senonian; Quedlinburg.
Kosmogyra acanthica, Stache, 1889, p. 135, pl. iv, fig. 5. (= Chara
      acanthica, Stache, 1880.)
                                        Upper Cretaceous (?); Corgnale.
--- cingulata, Stache, 1889, p. 121, pl. ii, fig. 20. (= Chara cingulata,
      Stache, 1880.)
                                 Liburnian (Upper Cretaceous); Cosina.
  - guttifera, Stache, 1889, p. 134, pl. iv, fig. 6. (= Chara guttifera,
      Stache, 1880.)
                                                                  Ibid.
   ornata, Stache, 1889, p. 134. pl. iv, figs. 4, α, b. (= Chara ornata,
      Stache, 1880.)
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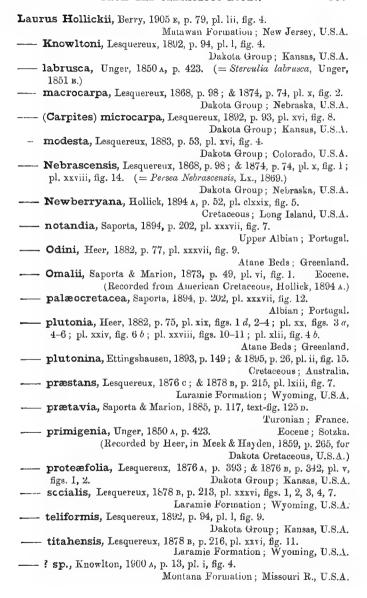
Kosmogyra perarmata, Stache, 1889, p. 134, pl. iv. figs. 3 a, b. (= Chara perarmata, Stache, 1880.) Liburnian (Upper Cretaceous); Cosina. --- superba, Stache, 1889, p. 134, pl. iv, figs. 2 a, b. (= Chara superba, Stache, 1880.) Upper Cretaceons (?); Divacea. Kosmogyrella carinata, Stache, 1889, p. 121, pl. ii, fig. 19. (= Chara carinata, Stache, 1880.) Krannera mirabilis, Corda (in litt.), Velenovsky, 1885, p. 1, pl. i, figs. 1-7, 10-13; pl. iv, figs. 1, 2, 4, 7, 8, 9. (= Palæostrobus Cenomanian; Bohemia. mirabilis, Renger, 1866.) Laccopteris Dunkeri, Schenk, 1871 A, p. 17, pl. viii, figs. 3-5; Velenovsky, 1888, p. 12, pl. ii, figs. 3-7. Cenomanian; Bohemia. - pulchella, Heer, 1881, p. 16, pl. xv, figs. 7, 7 b. Neocomian : Portugal. Lagynophora articulata, Stache, 1889, p. 133, pl. vi, fig. 5. Liburnian (Upper Cretaceous); Cosina. --- foliosa, Stache, 1889, p. 133, pl. iv, figs. 10, 11. - liburnica, Stache, 1889, p. 132, pl. iv, figs. 9, 14, (= Chara liburnica, Stache, 1880.) Ibid. — nodulifera, Stache, 1889, p. 133, pl. vi, fig. 3. Ibid. ---- symmetrica, Stache, 1889, p. 133, pl. vi, figs. 1, 4. Ibid. Lambertia dura, Velenovsky, 1883, p. 30, pl. x, fig. 16. (= Drynaria dura (Velenovsky), Bayer, 1899.) Cenomanian; Bohemia, Laminarites crenatus, Debey, 1849, p. 299 [nomen nudum]. Senonian; Aix, Rhenish Prussia, - polystigma, Debey & Ettingshausen, 1859 A, p. 192, pl. i, fig. 6. Ibid. - spathulatus, Debey, 1849, p. 299 [nomen nudum]. Ibid. — tuberculosus, Sternberg, 1833, p. 35. (= Fucoides tuberculosus, Cretaceous; La Rochelle, France. Brongniart, 1828.) Lamprocarpites nitidus, Heer, 1882, p. 58, pl. viii, figs. 10 b, 12-14. Atane Beds; Greenland, Laricopsis angustifolia, Fontaine, 1889, p. 233, pl. cii, figs. 9, 10; pl. ciii, figs. 1, 4. Potomac Formation; Virginia, U.S.A. - brevifolia, Fontaine, 1889, p. 234, pl. cii, figs. 5, 6. - longifolia, Fontaine, 1889, p. 233, pl. cii, figs. 7, 8; pl. ciii, figs. 2, 3; pl. clxv, fig. 4; pl. clxviii, figs. 5, 6. Ibid. - longifolia latifolia, Fontaine in Ward, 1905, p. 312, pl. lxxiii, Kootanie Formation; Montana, U.S.A. figs. 11-14. Laurelia primæva, Lesquereux, 1892, p. 108, pl. xx, fig. 8. Dakota Group; Kansas, U.S.A. Laurinium brunswicense, Vater, 1884, p. 845, pl. xxix, figs. 22-24. Lower Senonian (?); Helmstedt. Laurinophyllum austro-caledonicum, Crié, 1889, p. 27 [nomen Cretaceous; New Caledonia.

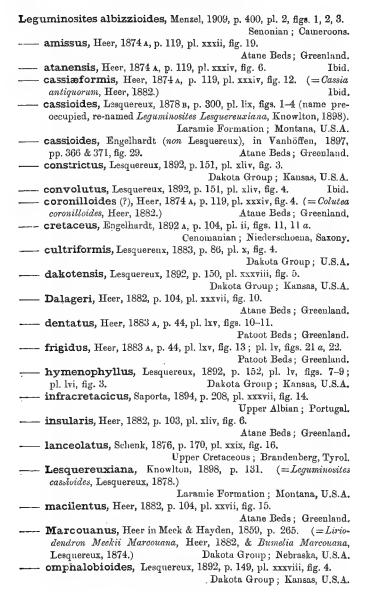
Laurinoxylon albiense, Fliche, 1905. p. 356, pl. x, figs. 2-3.

Albian; Madagascar.

nudum].

Laurinoxylon primigenium, Schenk, 1883, p. 11, pl. iii, fig. 10;
pl. v. ngs. 10-10. (Cenomanian (2) · Caine E
uniseriatum, Gothan, 1908 A, p. 16, pl. ii, figs. 3-11.
Oretaceous (?): Antarctica-
sp., Gothan, 1908 A, p. 19, pl. ii, figs. 12, 13. Thid
Laurogene cretacea, Ettingshausen in Reuss, 1854, p. 740 [nomen
nudum . Cenomanian : Moletein Moravia
Laurophyllum angustifelium, Newberry (non Lesquereux), 1895,
p. 86, pl. xvii, figs. 10, 11. Amboy Clay; New Jersey, U.S.A.
aquisgranense, Lange, 1890, p. 669, pl. xxxiv, fig. 4.
Senonian; Gemmenich, Rhenish Prussia,
— austro-caledonicum, Crié, 1889, p. 27 [nomen nudum].
Cretaceous; New Caledonia.
— debile, Dawson, 1883, p. 22, pl. ii, figs. 7, 7 a.
Upper Cretaceous; North-West Territory, Canada.
elegans, Hollick, 1906 A, p. 81, pl. xxvii, figs. 1-5.
Raritan Formation; Staten Island, U.S.A.
ellsworthianum, Lesquereux, 1892, p. 95, pl. xiii, fig. 7. (= Quercus
ellsworthianus, Lesquereux, 1868.) Dakota Group; Kansas, U.S.A.
insigne, Dawson, 1894, p. 61, pl. vii, figs. 24, 25.
Upper Cretaceous; Vancouver Island, Canada.
lanceolatum, Newberry, 1895, p. 86, pl. xvii, figs. 1, 12.
Amboy Clay; New Jersey, U.S.A.
—— <b>minus</b> , Newberry, 1895, p. 86, pl. xvi, figs. 7-9. Ibid.
— nervillosum, Hollick, 1906 A, p. 82, pl. xxvii, figs. 6, 7.
Raritan Formation; Staten Island, U.S.A.
reticulatum, Lesquereux, 1873, p. 425; & 1874, p. 76, pl. xv.
figs. 4, 5. (= Ficus reticulata (Lx.), Hollick, 1898.)
Dakota Group; Kansas, U.S.A.
Laurus affinis, Hosius & von der Marck, 1880, p. 167, pl. xxxi, fig. 9.
Upper Senonian; Haldem, Westphalia,
- affinis, Velenovsky (non Hosius & von der Marck), 1887, p. 70,
pl. xxviii, figs. 4, 5, 7, 8. Cenomanian; Bohemia.
angusta, Heer, 1882, p. 76, pl. xx, figs. 1 b, 7; pl. xliii, fig. 1 c.
Atane Bods; Greenland.
antecedens, Lesquereux, 1892, p. 92, pl. xi, fig. 3.
Dakota Group; Kansas, U.S.A.
- attenuata, Saporta, 1894, p. ?, pl. xxxvii, fig. 9.
Cretaceous (1); Portugal.
— Colleti, Fliche, 1892, p. 1085; & 1896, p. 279, pl. xiii, fig. 7, text-
fig. 13. Alpian; France.
crassinervis, Dawson, 1883, p. 23.
Upper Cretaceous (?); North-West Territory, Canada.
cretacea, Ettingshausen, 1867 A, p. 252, pl. ii, fig. 13.
(lenomanian: Niederschoene, Saxon)
Hollae, Heer, 1882, p. 76, pl. xxxiii, fig. 13; pl. xliv, fig. 5 b;
pl. xlv, fig. 3. Atane Beds; Greenland.



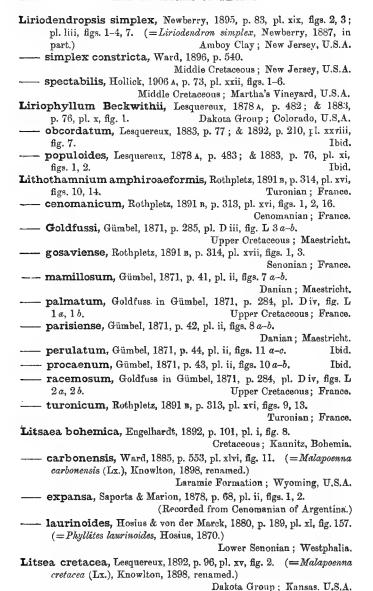


Leguminosites orbiculatus, Heer, 1882, p. 104, pl. xx, fig. 3 c.	
Atane Beds; Greenland.	
— ovalifolius, Heer, 1882, p. 103, pl. xxvii, fig. 14. Ibid.	
ovatus, Schenk, 1876, p. 170, pl. xxix, fig. 15.	
Upper Cretaceous; Brandenberg, Tyrol.	
— pachyphyllus, Ettingshausen, 1893, p. 151; & 1895, p. 52, pl. iv,	
fig. 18. Cretaceous; Australia.	
— patootensis, Heer, 1883 A, p. 44, pl. lxv, figs. 12, 12 b.	
Patoot Beds; Greenland.	
— phaseolites, Heer, 1874 A, p. 118, pl. xxxiv, figs. 7-11.	
Atane Beds; Greenland.	
podogonialis, Lesquereux, 1892, p. 148, pl. xiii, fig. 11; pl. xxxviii,	
fig. 16. Dakota Group; Kansas, U.S.A.	
prodromus, Heer, 1871, p. 1184; & 1874 A, p. 118, pl. xxxiv,	
fig. 13. Atane Beds; Greenland.	
raritensis, Berry, 1909, p. 257, pl. xviii, fig. 4. Raritan Formation; New Jersey, U.S.A.	
— robiniifolia, Berry, 1910 A, p. 196.  Middle Cretaceous; North Carolina, U.S.A.	
— truncatus, Lesquereux, 1892, p. 150, pl. xxi, fig. 7.	
Dakota Group; Kansas, U.S.A.	
Lemna? bullata, Lesquereux, 1875, p. 363.	
Laramie Formation; Wyoming, U.S.A.	
— scutata, Dawson, 1875.	
(Recorded from Montana Group by Lesquereux, 1878.)	
Lepidocaryopsis Westphaleni, Stur, 1873, p. 2.	
Cenomanian; Bohemia.	
Lepidodendron punctatum, Sternberg, 1820, p. 23, pl. iv, figs. 1, 2,	
(=Protopteris punctata, Presl.)	
Leptospermum cretaceum, Velenovsky, 1889, p. 21, pl. i, fig. 10.	
(=Leptospermum macrocarpum, Vel.) Cenomanian, Bohemia.	
- macrocarpum, Velenovsky, 1889, p. 27, pl. i, fig. 10. lbid.	
Leptostrobus? alatus, Ward, 1899 B, p. 673, pl. clxiii, figs. 16, 17.	
Lower Cretaceous; Black Hills, U.S.A.	
foliosus, Fontaine, 1889, p. 230, pl. ci, fig. 4; pl. ciii, fig. 5; pl. civ.	
fig. 1. Potomac Formation; Virginia, U.S.A.	
— longifolius, Fontaine, 1889, p. 228, pl. ci, figs. 2, 3; pl. cii, figs. 1-4;	
pl. cii, figs. 6-12; pl. civ, fig. 6.	
? multificrus, Fontaine, 1889, p. 230, pl. clxv, fig. 6. Ibid.	
- ? ovalis, Ward, 1905, p. 514, pl. cviii, figs. 9, 10 (naming Lepto-	
strobus? (b) sp. Fontaine, 1889, p. 231, pl. exxxvi, figs, 10, 10 a).	
Ibid.	
? sp. (a) Fontaine, 1889, p. 231, pl. exxxv, fig. 6. Ibid.	
? sp. (b) Fontaine, 1889, p. 231, pl. exxxvi, fig. 10. Ibid.	
? sp. (c) Fontaine, 1889, p. 232, pl. cxxxvi, fig. 11. Ibid.	
Libocedrus cretacea, Heer, 1882, p. 49, pl. xxix, figs. 1-3; pl. xliii,	
fig. 1 d. Atane Beds; Greenland.	

fig. 6.

Libocedrus salicornioides cretacea, Velenovsky, 1885, p. 28, pl. viii, fig. 2. Perucer Beds; Bohemia. Veneris, Velenovsky, 1885, p. 28, pl. x, figs. 13, 15, 17. Planer; Bohemia. Limnophyllum lanceolatum, Hosius & von der Marck, 1880, p. 184, pl. xxxviii, fig. 154. Lower Senonian; Westphalia. - primaevum, Hosius & von der Marck, 1880, p. 183, pl. xxxviii, fig. 153. Ibid. Lindera Masoni, Lesquereux, 1892, p. 96, pl. xviii, figs. 9, 10 (renamed Benzoin Masoni, Knowlton, 1898). Dakota Group; Kansas, U.S.A. - venusta, Lesquereux, 1892, p. 95, pl. xvi, figs. 1, 2 (re-named Benzoin venustum, Knowlton, 1898). Ibid. Liquidambar integrifolium, Lesquereux, 1868, p. 93; & 1874, p. 56, pl. ii, figs. 1-3; pl. xxiv, fig. 2; pl. xxix, fig. 8. Dakota Group; Nebraska, U.S.A. - obtusilobatus (Heer), Hollick in Newberry, 1898, p. 101, pl. v, fig. 4; pl. xii, fig. 4. (=Phyllites obtusilobatus, Heer, 1859.) Dakota Group; Kansas, U.S.A. Liriodendron acuminatum, Lesquereux, 1884, p. 227. Dakota Group ; Kansas, U.S.A. — acuminatum, var. bilobatum, Lesquereux, 1892, p. 207, pl. xxviii, fig. 4. alatum, Newberry MS., Hollick, 1894 E, p. 467, pl. ccxx. Laramie Formation; Colorado, U.S.A. -- attenuatum, Hollick, 1906 A, p. 68, pl. xxi, figs. 9-11. Middle Cretaceous; Long Island, U.S.A. --- Celakovskii, Velenovsky, 1882 A, p. 213; & 1883, p. 43, pl. xiv, fig. 2. Cenomanian; Bohemia. - cruciforme, Lesquereux, 1884, p. 227. (=L. giganteum cruciforme, Lx., 1892.) Dakota Group; Kansas, U.S.A. — dubium, Berry, 1907, p. 196, pl. xiv, fig. 3. Middle Cretaceous; North Carolina, U.S.A. —— giganteum, Lesquereux, 1868, p. 99; & 1874, p. 93, pl. xxii, fig. 2. Dakota Group; Nebraska, U.S.A. giganteum cruciforme, Lesquereux, 1892, p. 206, pl. xxviii, figs. 1, 2. (=L. cruciforme, Lx., 1884.)Dakota Group; Kansas, U.S.A. — intermedium, Lesquereux, 1868, p. 99; & 1874, p. 93, pl. xx, Dakota Group; Nebraska, U.S.A. ---- laramiensis, Ward, 1885, p. 556, pl. lx, fig. 1. Montana Formation; Wyoming, U.S.A. - Meekii, Heer in Meek & Hayden, 1859, p. 265; & Heer, 1867, Dakota Group; Nebraska, U.S.A. p. 21, pl. iv, fig. 3. - Meekii genuina, Heer, 1882, p. 98, pl. xxii, figs. 12-13; pl. xxiii, Atane Beds : Greenland.

Liriodendron Meekii Marcouana, Heer, 1882, p. 82, pl. xxii
figs. 4-7, 11; pl. xxiii, fig. 3; pl. xlv, fig. 13 a, b, (=Leguminosites
Marcouanus, Heer, 1859.) Atane Beds; Greenland.
— Meekii mucronulata, Heer, 1882, p. 88, pl. xxii, figs. 3-10.
Ibid.
— Meekii obcordata, Heer, 1882, p. 88, pl. xxii, figs. 1 b, 2; pl. xxiii,
fig. 4. (= Phyllites obcordatus, Heer, 1859.) Ibid.
- Meekii primæva, Heer, 1882, p. 88, pl. xviii, fig. 4c; pl. xxii,
fig. 9; pl. xxiii, fig. 5.
- morganensis, Berry, 1906 B, p. 176; and 1906 E, p. 150, pl. xxi,
figs. 2-4; pl. xxiii, fig. 1; pl. xxv.
Magothy Formation; New Jersey, U.S.A.
oblongifolium, Newberry, 1887, p. 5, pl. lxi, fig. 1.
Amboy Clay; New Jersey, U.S.A.
pinnatifidum, Lesquereux, 1884, p. 227.
Dakota Group; Kansas, U.S.A.
— prætulipiferum, Dawson, 1894, p. 63, pl. viii, fig. 27.
Upper Cretaceous; Vancouver Island, Canada.
— primævum, Newberry, 1870, p. 12; & 1878, pl. vi, fig. 7 (not
named); & Lesquereux, 1892, p. 203, pl. xxiv, fig. 4; pl. xxvi, figs. 1-4.
Dakota Group; Nebraska, U.S.A.
—— quercifolium, Newberry, 1887, p. 6, pl. lxii, fig. 1.
Amboy Clay; New Jersey, U.S.A.
Schwarzii, Richter, 1904, p. 16, pl. ii, fig. 10; 1905, p. 6, pl. i,
fig. 10. Senonian; Quedlinburg.
simplex & L. angustifolia, Newberry, 1896.)
Amboy Clay; New Jersey, U.S.A.
— Snowii, Lesquereux, 1892, p. 209, pl. xxix, figs. 1, 2.
Dakota Group; Kansas, U.S.A.
succedens, Dawson, 1894, p. 62, pl. viii, fig. 26.
Upper Cretaceous; Vancouver Island, Canada.
— Wellingtonii, Lesquereux, 1892, p. 208, pl. xxviii, fig. 3.
Dakota Group; Kansas, U.S.A.
Liriodendropsis angustifolia, Newberry, 1895, p. 84, pl. liii, fig. 8.
(=Liriodendron simplex, Newberry, 1887, in part.)
Amboy Clay; New Jersey, U.S.A.
constricta (Ward), Hollick, 1906 A, p. 71, pl. xxii, fig. 7; pl. xxvi,
figs. 6-15; pl. xl, fig. 15.
Middle Cretaceous; Martha's Vineyard, U.S.A.
lacerata (Sap.), Ward, 1896, p. 540. (= Chondrophyton laceratum,
Saporta, 1894.) Cenomanian; Portugal.
retusa (Heer), Hollick, 1906 A, p. 72, pl. xxv, figs. 8, 9. (=Sapo-
tacites retusus, Heer, 1883 A.)
Middle Cretaceous; New Jersey, U.S.A.



Litsea falcifolia, Lesquereux, 1892, p. 97, pl. xi, fig. 5. (=Malapoenna falcifolia (Lx.), Knowlton, 1898, renamed.) Dakota Group: Kansas, U.S.A. --- Weediana, Knowlton in Weed & Knowlton, 1893, p. 55. (=Malapoenna Weediana, Knowlton, 1898.) Laramie Formation; Montana, U.S.A. Lochmophycus caulerpoides, Debey & Ettingshausen, 1859 A, p. 198, pl. ii, figs. 1-5. Senonian; Aix, Rhenish Prussia. Lomatia Saportanea, Lesquereux, 1876 B, p. 346. Dakota Group; Kansas, U.S.A. ? Saportanea, var. longifolia, Lesquereux, 1883, p. 52. Dakota Group; Colorado, U.S.A. Lomatites palæo-Ilex, Ettingshausen, 1867 A, p. 255, pl. iii, fig. 16. Cenomanian; Niederschoena, Saxony, Lomatopteris superstes, Saporta, 1879, p. 198, text-fig. 27, i. Turonian; Toulon, France, Lonchopteris Huttoni, Presl in Sternberg, 1838, p. 166. (=Lonchopteris Mantelli, Lindley & Hutton, p. 59, pl. clxxi.) Lower Greensand; England. —— lusitanica, Saporta, 1890 A, p. 814; & 1894, p. 80, pl. xvi, fig. 13. Valanginian; Portugal. — Mantelli, Brongniart, 1828, p. 369, pl, cxxxi, figs. 4 & 5. (=Polypodites Mantelli, Goeppert, 1836.) Lower Cretaceous; Beauvais. Lycopodites Francheti, Saporta, 1894, p. 131, pl. xxiii, fig. 13; pl. xxv, fig, 21. Urgonian; Portugal. gracilis, Brongniart (non Oldham & Morris), 1828 A, p. 84 [nomen nudum]. Lower Cretaceous; Bavaria. gracillimus, Saporta, 1894, p. 131, pl. xxvi, fig. 5. Urgonian : Portugal. - insignis, Reich in Geinitz, 1842, p. 98. Cenomanian; Niederschoena, Saxony. Limai, Saporta, 1894, p. 132, pl. xxiii, figs. 16-17; pl. xxiv, fig. 11 α: pl. xxvi, fig. 1. Urgonian; Cercal, Portugal. - ? montanensis, Fontaine in Ward, 1905, p. 302, pl. lxxii, figs. 15, Kootanie Formation; Montana, U.S.A. 16. Lycopodium cretaceum, Berry, 1910 c, p. 276, text-fig. 1. Upper Cretaceous; S. Carolina, U.S.A. Lesquereuxii, Knowlton, 1897, p. 154; & 1900 a, p. 24. Montana Formation; Wyoming, U.S.A, redivivum, Heer, 1874 A, p. 60, pl. xiii, fig. 1. Kome Beds; Greenland. Lygodites patulatus, Schulze, 1888, p. 26 [nomen nudum]. Upper Quader : Germany. Lygodium compactum, Lesquereux, 1878 B, p. 64, pl. v, fig 9. Laramie Formation; Colorado, U.S.A. — cretaceum, Debey & Ettingshausen, 1859 в, р. 198, pl. ii,

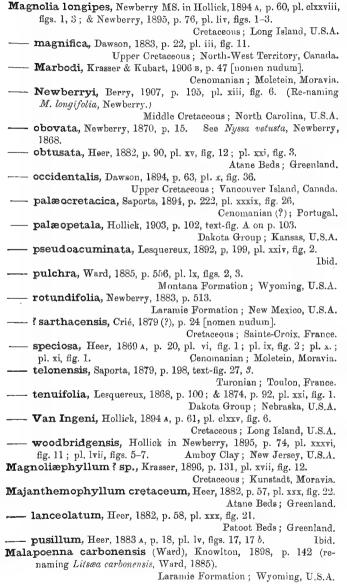
figs. 18-21; pl. iii, fig. 28.

Senonian; Aix, Rhensih Prussia.

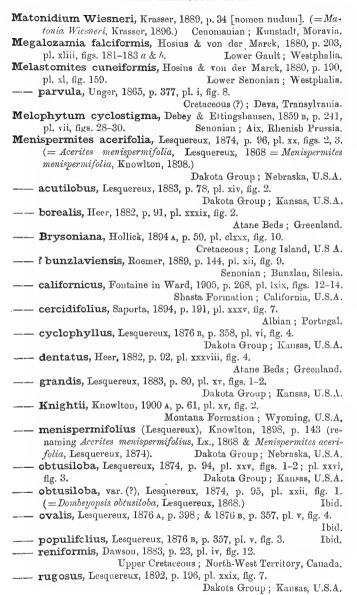
Lygodium trichomanoides, Lesquereux, 1874, p. 45, pl. i, fig. 2.

Dakota Group; Kansas, U.S.A.

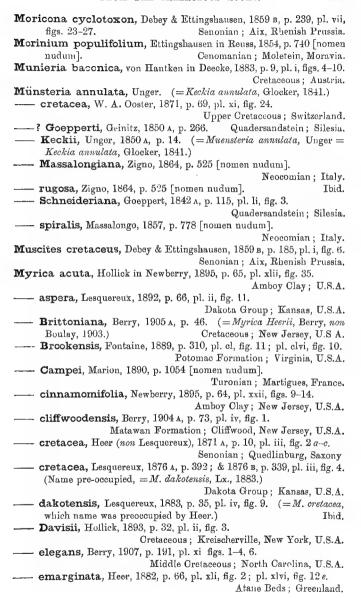
Macclintockia appendiculata, Heer, 1882, p. 71, pl. xxxvii, fig. 1.
Atane Beds; Greenland.
— cretacea, Heer, 1882, p. 70, pl. xxxvi, figs. 1, 2 a; pl. xxxvii, figs. 2-4. Ibid.
— trinervis, Heer, 1868, p. 115, pl. xv, figs. 7-9. Tertiary.
(Recorded Dawson, 1894, Cretaceous.)
Macrotæniopteris vancouverensis, Dawson, 1894, p. 55, pl. v,
figs. 1-3. Upper Cretaceous; Vancouver Island, Canada.
Magnolia alternans, Heer in Capellini & Heer, 1867, p. 20, pl. iii,
figs. 2-4; pl. iv, figs. 1-2. Dalota Group; Nebraska, U.S.A.
— amplifolia, Heer, 1869 A, p. 21, pl. viii, figs 1, 2; pl. ix, fig. 1.
Cenomanian; Moletein, Moravia.
— angustifolia, Newberry, 1883, p. 513.
Laramie Formation; New Mexico, U.S.A.
- auriculata, Newberry MS. in Hollick, 1894 A, p. 61, pl. clxxix,
figs. 6, 7; & Newberry, 1895, p. 75, pl. xli, fig. 13; pl. lviii, figs. 1-11.
(Re-named Magnolia Hollicki, Berry, 1909.)
Cretaceous; Long Island, U.S.A.
— Boulayana, Lesquereux, 1892, p. 202, pl. Ix, fig. 2.
Dakota Group; Kansas, U.S.A.
— Capellinii, Heer in Capellini & Heer, 1867, p. 21, pl. iii, figs. 5, 6.
Dakota Group; Nebraska, U.S.A.
cenomanensis, Saporta & Marion, 1878, p. 13.
Cenomanian; Bohemia.
- cuneata, Newberry in Raynold's Expl., 1869, p. 163 [nomen
nudum]. Cretaceous; Orcas Island, U.S.A.
— Delgadoi, Saporta, 1894, p. 194, pl. xxxv, fig. 5.
Albian (?); Portugal.
— ensifolia, Lesquereux, 1872, p. 302. (= Celastrophyllum ensifolium,
Lx., 1874.) Dakota Group; Kansas, U.S.A.
- glaucoides, Newberry MS. in Hollick, 1894 A, p. 60, pl. clxxv,
figs. 1, 7; & Newberry, 1895, p. 74, pl. lvii, figs. 1-4.
Cretaceous; Long Island, U.S.A.
- Hollicki, Berry, 1909, p. 253 (re-naming Magnolia auriculata,
Newberry in Hollick, 1894 A).
Raritan Formation; New Jersey, U.S.A.
Isbergiana, Heer, 1882, p. 91, pl. xxxvi, fig. 3.
Atane Beds; Greenland.
Lacoeana, Lesquereux, 1892, p. 201, pl. lx, fig. 1.
Dakota Group; Kansas, U.S.A.
longifolia, Newberry MS. in Hollick, 1893, p. 36, pl. iii, fig. 9;
& Newberry, 1895, p. 76, pl. lv, figs. 3, 5; pl. lvi, figs. 1-4. (=Mag-
nolia Newberryi, Berry, 1907.)  Raritan (?) Formation; Woodbridge, U.S.A.
marian (i) rormation; woodbridge, C.S.A.

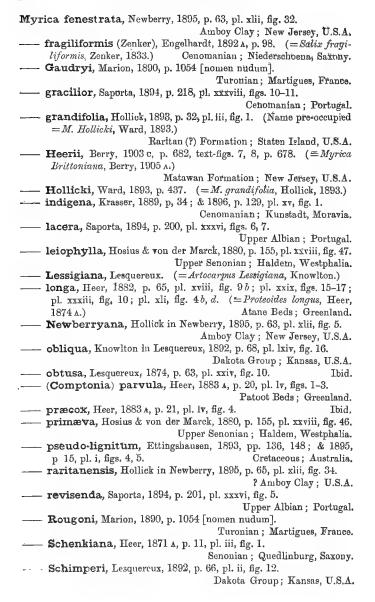


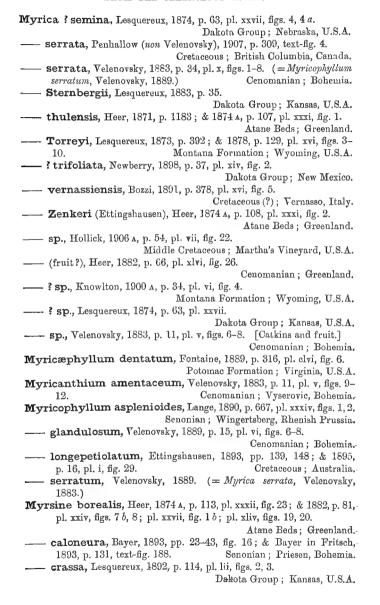
- Malapoenna cretacea (Lesquereux), Knowlton, 1898, p. 142 (renaming Litsea cretacea, Lx., 1892). Dakota Group; Kansas, U.S.A. - falcifolia (Lesquereux), Knowlton, 1898, p. 142 (re-naming Litsea falcifolia, Lx., 1892). Ibid. —— horrellensis, Berry, 1910 A, p. 198, pl. xxiv, figs. 1-9. Middle Cretaceous; North Carolina, U.S.A. --- macrophylloides, Knowlton, 1900 A, p. 57, pl. xiv, figs. 4, 5. Montana Formation; Wyoming, U.S.A. --- Weediana, Knowlton, 1898, p. 142 (re-naming Litsea Weediana, Knowlton, 1893). --- sp., Hollick, 1906 A, p. 78, pl. xxxi, fig. 4. Middle Cretaceous; Martha's Vineyard, U.S.A. Malpighiastrum cretaceum, Ettingshausen, 1893, pp. 138, 150; & 1895, p. 47, pl. iv, fig. 1. Cretaceous; Australia. Mammacites Francheti, Fliche, 1896, p. 283, pl. xiii, figs. 7 and 71. Cenomanian; Chaudefontaine, France. Manihotites georgiana, Berry, 1910 B, p. 507, text-figs. 1, 2. Upper Cretaceous; Georgia, U.S.A. Mantellia? Babbagensis, Woodward, 1885, p. 290, pl. vii, figs. 1-3. Cretaceous (?); Mt. Babbage, Australia. — inclusa, Carruthers, 1870, p. 703, pl. lxiii, figs. 2, 3. (= Cycadeoidea inclusa (Carr.), Schimper, 1874.) Lower Greensand; Potton. Marattia cretacea, Velenovsky, 1888 B, p. 9, pl. i, fig. 13. Perucer Beds; Bohemia. --- minor, Saporta, 1894, p. 83, pl. xvi, fig. 14. Valanginian; Portugal. Marattites desideratus, Marion & Laurent, 1898, p. 189, pl. j, fig. 1. Cretaceous; Roumania. Marsilea Andersoni, Hollick, 1905 c, p. 409, pl. lxxi, figs. 1-3. Cretaceous; Long Island, U.S.A. — attenuata, Hollick, 1894 p, p. 256, pl. cev, fig. 10. (= Salvinia attenuata, Lesquereux, 1876 c.) Laramie Formation; Wyoming, U.S.A. Marsilia cretacea, Heer, 1882, p. 39, pl. xvi, figs. 11, 12. Atane Beds; Greenland. ——? (Baiera) grandis, Heer, 1874, p. 37, pl. iii, fig. 4. --- perucensis (Velenovsky), Bayer in Fritsch & Bayer, 1901, p. 86, text-fig. 34. (=Marsilia sp., Velenovsky.) Perucer Beds; Vyserovic, Bohemia.
- ---- ? sp., Velenovsky, 1888, p. 597, figs. 11-13. (=M. perucensis (Velenovsky), Bayer.)
- Matonia Wiesneri, Krasser, 1896, p. 119, pl. xi, fig. a1; pl. xii, figs. 1 & 2; pl. xvi, fig. 10. (= Matonidium Wiesneri, Krasser, 1889.)
- Cenomanian; Kunstadt, Moravia. Matoridium Althausii (Dunker), Ward, 1899 B, p. 653, pl. 160, figs. 5-8. Lower Cretaceous; Black Hills, U.S.A.



Menispermites salinæ (Lesquereux), Knowlton, 1898, p. 143 (re-
naming Populites Salinæ, Lx., 1873). Dakota Group; Kansas, U.S.A.
salinensis, Lesquereux, 1874, p. 95, pl. xx, figs. 1, 4. Ibid.
— tenuinervis, Fontaine, 1889, p. 322, pl. clxxii, fig. 8.
Potomac Formation; Maryland, U.S.A.
virginiensis, Fontaine, 1889, p. 321, pl. elxi, figs. 1, 2.
Potomac Formation; Virginia, U.S.A.
— Wardianus, Hollick in Newberry, 1895, p. 85, pl. xxix, figs. 9, 11.
Amboy Clay; New Jersey, U.S.A.
sp., Dawson, 1894, p. 62, pl. xi, fig. 50.
Upper Cretaceous; Vancouver Island, Canada.
sp., Hollick, 1906 A, p. 62, pl. xii, fig. 7 (for Hedera sp.?, Hollick).
Cretaceous; Staten Island, U.S.A.
Menispermophyllum Celakovskianum, Velenovsky, 1889, p. 54
[nomen nudum]. (=Menispermophyllum Celakovskii, Velenovsky.)
Perucer Beds; Bohemia.
Celakovskii, Velenovsky, in Fritsch & Bayer, 1901, p. 128. Ibid.
Menispermum (Cocculus) assimile, Marion, 1890, p. 1054.
Turonian; Martigues, France.
Mertensia Kurriana (Heer), Engelhardt, 1892 A, p. 84. (= Gleichenia
Kurriana, Heer.) Cretaceous; Bohemia.
— Zippei, Engelhardt, 1892 A, p. 83. (=Pecopteris Zippei, Corda=
Gleichenia Zippei, Heer.) Ibid.
Metrosideros perigrinus, Heer, 1874 A, p. 116, pl. xxvii, fig. 22.
Atane Beds; Greenland.
Microdictyon regale, Richter, 1899 A, p. 40.
Senonian; Quedlinburg, Saxony.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.
Senonian; Quedlinburg, Saxony. Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi,
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25–27.  Cenomanian; Bohemia.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 A, p. 43, pl. i, fig. 2.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  — gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites
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Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.  Mimusops ballotæoides, Engelhardt, 1892 a, p. 98, pl. ii, fig. 13.  Quader; Saxony.  Mitropicea Decheni, Debey, 1848 a, p. 120 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Noeggerathii, Debey, 1848 a, p. 120 [nomen nudum].
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Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  — gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.  Mimusops ballotæoides, Engelhardt, 1892 a, p. 98, pl. ii, fig. 13.  Quader; Saxony.  Mitropicea Decheni, Debey, 1848 a, p. 120 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Noeggerathii, Debey, 1848 a, p. 120 [nomen nudum]. Ibid.  Monheimia aquisgranensis, Debey & Ettingshausen, 1859 b, p. 211, pl. iv, figs. 3-10.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.  Mimusops ballotæoides, Engelhardt, 1892 a, p. 98, pl. ii, fig. 13.  Quader; Saxony.  Mitropicea Decheni, Debey, 1848 a, p. 120 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Noeggerathii, Debey, 1848 a, p. 120 [nomen nudum]. Ibid.  Monheimia aquisgranensis, Debey & Ettingshausen, 1859 g, p. 211, pl. iv, figs. 3-10.  polypodioides, Debey & Ettingshausen, 1859 g, p. 211, pl. iii,
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.  Mimusops ballotæoides, Engelhardt, 1892 a, p. 98, pl. ii, fig. 13.  Quader; Saxony.  Mitropicea Decheni, Debey, 1848 a, p. 120 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Noeggerathii, Debey, 1848 a, p. 120 [nomen nudum]. Ibid.  Monheimia aquisgranensis, Debey & Ettingshausen, 1859 B, p. 211, pl. iv, figs. 3-10.  polypodioides, Debey & Ettingshausen, 1859 B, p. 211, pl. iii, figs. 34-36; pl. iv, figs. 1-2, 21.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (=Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.  Mimusops ballotæoides, Engelhardt, 1892 a, p. 98, pl. ii, fig. 13.  Quader; Saxony.  Mitropicea Decheni, Debey, 1848 a, p. 120 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Noeggerathii, Debey, 1848 a, p. 120 [nomen nudum]. Ibid.  Monheimia aquisgranensis, Debey & Ettingshausen, 1859 B, p. 211, pl. iv, figs. 3-10.  polypodioides, Debey & Ettingshausen, 1859 B, p. 211, pl. iii, figs. 34-36; pl. iv, figs. 1-2, 21.  Monimia præ-vestita, Ettingshausen, 1893, pp. 135, 149; & 1895,
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.  Mimusops ballotæoides, Engelhardt, 1892 a, p. 98, pl. ii, fig. 13.  Quader; Saxony.  Mitropicea Decheni, Debey, 1848 a, p. 120 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Noeggerathii, Debey, 1848 a, p. 120 [nomen nudum].  Ibid.  Monheimia aquisgranensis, Debey & Ettingshausen, 1859 B, p. 211, pl. iii, figs. 34-36; pl. iv, figs. 1-2, 21.  Monimia præ-vestita, Ettingshausen, 1893, pp. 135, 149; & 1895, p. 23, pl. ii, figs. 13, 14.  Oretaceous; Australia.
Senonian; Quedlinburg, Saxony.  Microlepia pluripartita, Saporta, 1894, p. 83, pl. xv, fig. 17; pl. xvi, fig. 24.  Valanginian; Portugal.  Microlepidium striatulum, Velenovsky, 1889, p. 11, pl. i, figs. 25-27.  Cenomanian; Bohemia.  Microzamia? dubia, Berry, 1905 a, p. 43, pl. i, fig. 2.  Cretaceous; New Jersey, U.S.A.  gibba, Gorda in Reuss, 1846, p. 85, pl. xlvi, figs. 1-10. (= Conites gibbus, Reuss, 1844.)  Quader & Pläner; Bohemia.  Mimusops ballotæoides, Engelhardt, 1892 a, p. 98, pl. ii, fig. 13.  Quader; Saxony.  Mitropicea Decheni, Debey, 1848 a, p. 120 [nomen nudum].  Senonian; Aix, Rhenish Prussia.  Noeggerathii, Debey, 1848 a, p. 120 [nomen nudum]. Ibid.  Monheimia aquisgranensis, Debey & Ettingshausen, 1859 B, p. 211, pl. iv, figs. 3-10.  polypodioides, Debey & Ettingshausen, 1859 B, p. 211, pl. iii, figs. 34-36; pl. iv, figs. 1-2, 21.  Monimia præ-vestita, Ettingshausen, 1893, pp. 135, 149; & 1895,

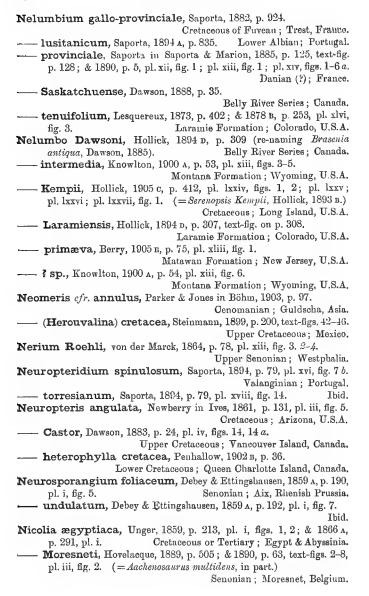


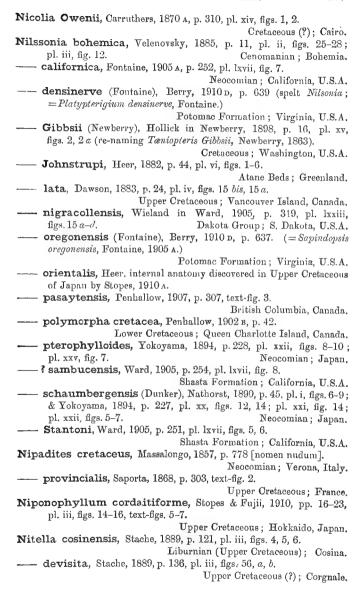




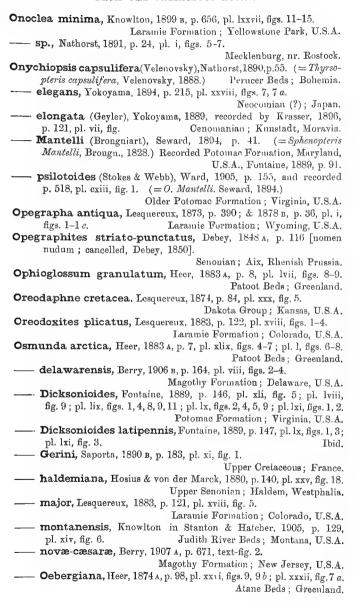
Myrsine elongata, Newberry MS, in Hollick, 1894 A, p. 54, pl. clxxvii, fig. 2; & Newberry, 1895, p. 122, pl. xxii, figs. 1-3 (re-named Myrsine Gaudini, Berry, 1909.) Cretaceous; Long Island, U.S.A. — Gaudini (Lesquereux), Berry, 1909, p. 263. (Re-maining Myrsinites? Gaudini, Lesquereux, 1892, and Myrsine elongata, Hollick, 1894 A.) Raritan Formation; New Jersey, U.S.A. — manifesta, Bayer, 1893, pp. 21, 43, fig. 15; & Bayer in Fritsch, Senonian; Priesen, Bohemia. 1893, p. 130, text-fig. 187. - oblongata, Hollick in Newberry, 1895, p. 122, pl. xlii, fig. 15. ? Amboy Clay; U.S.A. Myrsinites? Gaudini, Lesquereux, 1892, p. 115, pl. lii, fig. 4 (renamed Myrsine Gaudini, Berry, 1909). Dakota Group; Kansas, U.S.A. Myrsinophyllum revisendum, Saporta, 1894, p. 186, pl. xxxiv, Albian; Portugal. varians, Velenovsky, 1889, p. 25, pl. iv, figs. 8, 9; pl. v, fig. 12; Cenomanian; Bohemia. pl. vi, figs. 10, 11. venulosum, Saporta, 1894, p. 204, pl. xxxvii, fig. 15. Upper Albian; Portugal. Myrtophyllum antiquorum, Heer, 1871, p. 1184 [nomen nudum]. Atane Beds; Greenland. --- (Eucalyptus?) Geinitzi, Heer, 1869 A, p. 22, pl. xi, figs. 3, 4. (=Eucalyptus Geinitzi, Heer, 1882.) Cenomanian; Moletein, Moravia. --- latifolium, Ettingshausen, 1893, p. 150; & 1895, p. 50, pl. iv, Cretaceous; Australia. fig. 19. — longifolium, Velenovsky, 1882 a, p. 214 [nomen nudum]. Cretaceous; Bohemia. --- parvulum, Heer, 1882, p. 94, pl. xv, fig. 11; pl. xxi, fig. 4. Atane Beds; Greenland. — pusillum, Heer, 1871 A, p. 14, pl. iii, fig. 10. Senonian; Quedlinburg, Saxony. --- (Eucalyptus?) Schuebleri, Heer, 1869 A, p. 23, pl. xi, fig. 2. Cenomanian; Moletein, Moravia. — Warderi, Lesquereux, 1892, p. 136, pl. liii, fig. 10. Dakota Group; Kansas, U.S.A. Nageiopsis acuminata, Fontaine, 1889, p. 201, pl. lxxxv, fig. 11. Potomac Formation; Virginia, U.S.A. angustifolia, Fontaine, 1889, p. 202, pl. lxxxvi, figs. 8, 9; pl. lxxvii, figs. 2-6; pl. lxxviii, figs. 1, 3, 4, 6-8; pl. lxxxix, fig. 2. -- crassicaulis, Fontaine, 1889, p. 193, pl. lxxix, figs. 2, 6; pl. lxxxii, fig. 1; pl. lxxxiv, figs. 3, 9, 11. Ibid. --- decrescens, Fontaine, 1889, p. 199, pl. lxxvii, fig. 3. Ibid. — heterophylla, Fontaine, 1889, p. 201, pl. lxxxiv, fig. 4; pl. lxxxvi, figs. 6, 7; pl. lxxxviii, figs. 2, 5. Ibid.

Nageiopsis inæquilateralis, Fontaine, 1889, p. 200, pl. lxxxv, fig. 6.
$(=Podozamites\ inequilateralis,\ Berry,\ 1910\ c.)$
Potomac Formation; Virginia, U.S.A.
latifolia, Fontaine, 1889, p. 198, pl. lxxxii, fig. 3. (=Podozamites
latifolius, Berry, 1910 c.) Ibid.
longifolia, Fontaine, 1889, p. 195, pl. lxxv, fig. 1; pl. lxxvi, figs. 2-6;
pl. lxxvii, figs. 1, 2; pl. lxxviii, figs. 1-5; pl. lxxix, fig. 7; pl. lxxxv,
figs. 1, 2, 8, 9.
— microphylla, Fontaine, 1889, p. 201, pl. lxxxiv, fig. 6; pl. lxxxv,
fig. 14; pl. lxxxvi, figs. 1-3, 5.
montanensis, Fontaine in Ward, 1905, p. 312, pl. lxxiii, fig. 10.
Kootanie Formation; Montana, U.S.A.
obtusifolia, Fontaine, 1889, p. 200, pl. lxxxv, fig. 7.
Potomac Formation; Virginia, U.S.A.
— ovata, Fontaine, 1889, p. 199, pl. lxxvii, fig. 4; pl. lxxx, fig. 5.
Ibid.
recurvata, Fontaine, 1889, p. 197, pl. lxxv, fig. 2; pl. lxxix, fig. 4;
pl. lxxx, fig. 3.
— zamioides, Fontaine, 1889, p. 196, pl. lxxix, figs. 1, 3; pl. lxxx,
figs. 1, 2, 4; pl. lxxxi, figs. 1–6.
Nathorstia angustifolia, Heer, 1880 B, p. 7, pl. i, figs. 1-6.
Kome Beds; Greenland.
— firma, Heer, 1880 B, p. 7, pl. i, fig. 7, (= Danaeites firmus, Heer.)
Ibid.
—— latifolia, Nathorst, 1908, p. 17, pl. iii. Cenomanian; Greenland.
—— latifolia, Nathorst, 1908, p. 17, pl. iii. Cenomanian; Greenland. Nathorstiana arborea, Richter, 1909, p. 3, pl. viii, figs, 1, 2, 3, 5, 8,
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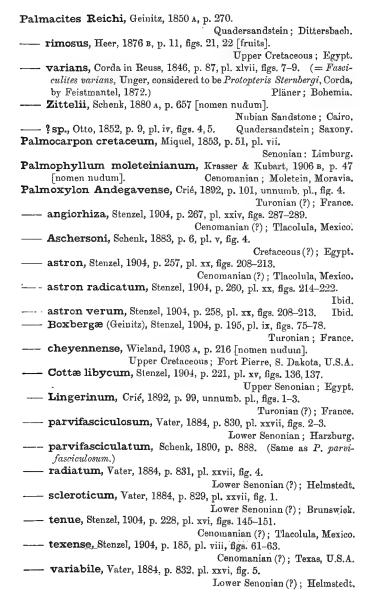
Nitella? (Chara) globulus, Stache, 1889, p. 121, pl. ia, fig. 16. Liburnian; Cosina. --- robusta, Stache, 1889, p. 136, pl. iv, fig. 7. (= Chara robusta, Stache, 1880.) Upper Cretaceous (?); Divacea. - **Stacheana** (Unger), Stache, 1889, p. 135, pl. iii, figs. 54, a, b, c, d; pl. iv, figs. 1 u, b; pl. v, figs. 40 a, b. (= Chara Stacheana, Unger, Upper Cretaceous (?); Cosina. 1860.) ---- subimpressa, Stache, 1889, p. 136, pl. iii, figs. 55 a, b. Upper Cretaceous (?); Trieste. Noeggerathiopsis Robinsi, Dawson, 1894, p. 56, pl. vi, fig. 7. Upper Cretaceous; Vancouver Island, Canada. Nordenskiöldia borealis, Heer, 1870 A, p. 65, pl. vii, figs. 1-13. Recorded Lesquereux, 1892, p. 219, in Dakota Group, Kansas. Nothopegoxylon scalariforme, Gothan, 1908 A, p. 20, pl. ii, figs. 14 Cretaceous (?); Antarctica. Nullipora gracilis, Reuss, 1846, p. 66, pl. xvi, figs. 4-6. Upper Cretaceous; Bohemia. Nulliporites granulosus, Heer, 1865, p. 190, text-fig. 103; & 1877, p. 143, pl. lviii, figs. 10, 11. Cretaceous; Switzerland. Nyssa Buddiana, Ward, 1887, p. 53, pl. xlvii. fig. 7. Laramie Formation; Wyoming, U.S.A. —— cuneatus, Newberry, 1863, p. 524; & 1898, p. 125, pl. xvii, tigs. 4-6. Cretaceous (?); Washington, U.S.A. — Snowiana, Lesquereux, 1892, p. 126, pl. lii, fig. 11. Dakota Group; Kansas, U.S.A. --- vetusta, Newberry, 1870, p. 11; & 1878, pl. ii, fig. 2 (as Magnolia obovata); & 1898, p. 125, pl. i, fig. 2; pl. iv, fig. 4. Dakota Group; Nebraska, U.S.A. Octea nassauensis, Hollick, 1906 A, p. 76, pl. xxvii, fig. 8. Middle Cretaceous; Long Island, U.S.A. Olea? myricoides, Saporta, 1894, p. 220, pl. xxxix, fig. 25. Cenomanian; Portugal. Oleandra arctica, Heer, 1874 A, p. 38, pl. xii, figs. 3-11; pl. xxi, fig. 2b. Kome Beds; Greenland. — graminæfolia, Knowlton, 1907, p. 113, pl. xi, figs. 5, 5 A, 6, 6 A. Kootanie Formation; Montana, U.S.A. Oleandrium tenerum, Saporta, 1890 A, p. 814; & 1894, p. 85, pl. xv, Valanginian: Portugal. fig. 3; pl. xvi, fig. 18. Oncopteris Kauniciana (Dormitzer), Velenovsky, 1888 B, p. 22, pl. v, fig. 1. (=Alsophilina Kauniciana, Dormitzer, 1853.) Perucer Beds; Bohemia. - Nettwalli, Dormitzer in Krejici, 1853, p. 28, pl. ii. Cenomanian : Bohemia. Onoclea inquirenda, Hollick, 1906 A, p. 32, pl. i, figs. 1-7. (= Caulinites inquirendus, Holliek, 1905 c.) Magothy Formation; Long Island, U.S.A.



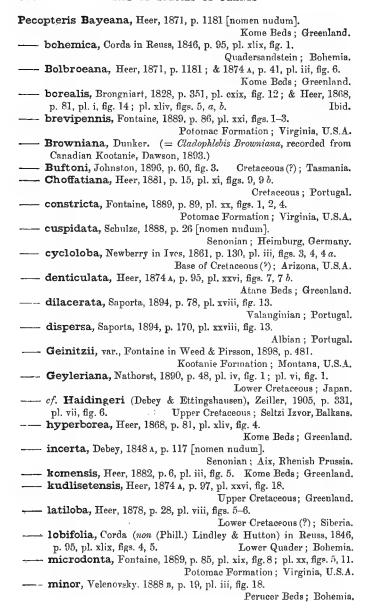
Osmunda petiolata, Heer, 1874 A, p. 57, pl. iii, figs. 1 c, 2 b; pl. xx, fig. 10 c. Kome Beds; Greenland. retinenda, Saporta, 1894, p. 107, pl. xix, figs. 16-17. Lower Cretaceous (?); Portugal. - sphenopteroides, Fontaine, 1889, p. 145, pl. xxv, fig. 13. Potomac Formation; Virginia, U.S.A. Osmundites skidegatensis, Penhallow, 1902 A, p. 3, pls. i-v, textfigs. 1, 3 on pp. 6, 10; & 1902 B, p. 32, pls. vii-xi. Lower Cretaceous; Queen Charlotte Island, Canada. Osmundophyllum cretaceum, Velenovsky, 1889, p. 6, pl. ii, fig. 21. Cenomanian; Bohemia. Otozamites (?) grönlandicus, Heer, 1874 A, p. 99, pl. xxvi, fig. 2. Atane Beds; Greenland. Pachyphyllum Heerianum, Saporta, 1894, p. 108, pl. xix, fig. 25. Lower Cretaceous (?); Portugal. Pachypteris cretacea, Debey, 1849, p. 299 [nomen nudum]. Senonian; Aix, Rhenish Prussia. --- dalmatica, Kerner, 1896, p. 47, pl. ii; pl. iii, figs. 1, 4; pl. v, fig. 10. Cenomanian; Dalmatia. - dalmatica dentata, Kerner, 1896, p. 47, pl. iii, fig. 3. — dimorpha, Kerner, 1896, p. 49, pl. iii, fig. 2; pl. v, fig. 8. Ibid. Pagiophyllum dubium, Fontaine, 1894, p. 271, pl. xxxix, figs. 2-11. Trinity Division; Texas, U.S.A. — sp., Dawson, 1893, p. 90, text-fig. 14. Kootanie Formation; North-West Territory, Canada. Palæanthus (Williamsonia) problematicus, Newberry, 1895, p. 125, pl. xxxv, figs. 1-9. (= Williamsonia problematica (Newby.), Ward, 1895.) Amboy Clay; New Jersey, U.S.A. Palæobromelia Jugleri, Ettingshausen, 1852 B, p. 3, pl. i, fig. 1; pl. ii, figs. 1-3. [Probably egg-cases of fishes (Stopes).] Wealden; Hanover. Palæocassia angustifolia, Ettingshausen, 1867 A, p. 261, pl. iii, figs. 6-7. (= Cassia angusta, Heer, 1882.) Cenomanian; Niederschoena, Saxony. lanceolata, Ettingshausen, 1867 A, p. 262, pl. i, fig. 8; pl. iii, fig. 8. Ibid. ---- laurinea, Lesquereux, 1892, p. 147, pl. lxiv, fig. 12. Dakota Group; Kansas, U.S.A. - phaseolitoides, Ettingshausen, 1887 A, p. 189, pl. ix, fig. 17. (= Cassia præ-phaseolitoides, Ettingshausen, 1895.) Upper Cretaceous; New Zealand. Palæocyparis flexuosa, Saporta, 1894, p. 108, pl. xix, figs. 19-20, 26; Lower Cretaceous (?); Portugal. pl. xx, figs. 1-5. - obscura, Saporta, 1894, p. 178, pl. xxxiv, fig. 8. Albian; Portugal. Palæohillia arkansana, Knowlton, 1895, p. 387, text-figs. 1-3.

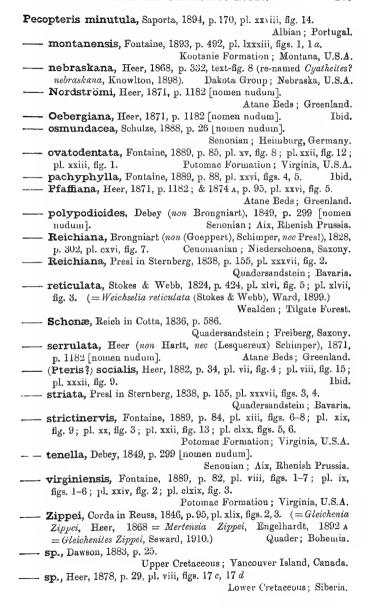
Trinity Division; Arkansas, U.S.A.

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Palæohillia sp., Holm, 1896, p. 207, pl. xvii, figs. 1, 2. [Structure of
       P. arkansana.
                                     Trinity Division; Arkansas, U.S.A.
Palæolepis bicornuta, Saporta, 1894, p. 179, pl. xxxiii, fig. 4c.
                                                     Albian : Portugal.
---- cheiromorpha, Saporta, 1894, p. 215, pl. xxxix, figs. 15-16.
                                               Cenomanian; Portugal
--- emarginata, Saporta, 1894, p. 179, pl. xxxiii, fig. 15.
                                                    Albian; Portugal.
--- multipartita, Saporta, 1894, p. 215, pl. xxxix, figs. 17-18.
                                               Cenomanian; Portugal.
Palæostrobus crassipes, Renger, 1866, p. 137, pl. i, figs. 2, 3, 4, 5.
      (= Dammarites crassipes, Goeppert.)
                                          Upper Cretaceous; Horice.
   - mirabilis, Renger, 1866, p. 134, pl. i, fig. 1. (=Krannera mirabilis,
                                      Upper Cretaceous; Novy Bydzov.
Palæospathe Sarthacensis, Crié, 1879 (?), p. 20.
                                     Cretaceous; Sainte-Croix, France.
Paleodictyon giganteum, Peruzzi, 1881, p. 1, pl. i, fig. 3.
                                                    Cretaceous; Italy.
Palinosphaeria sp., Reinsch, 1905, p. 402, text-fig. 1.
                                                    Upper Cretaceous.
Paliurus affinis, Heer, 1883 A, p. 42, pl. lxii, figs. 16-19.
                                              Patoot Beds : Greenland.
Dakota Group; Kansas, U.S.A.
— cretaceus, Lesquereux, 1892, p. 165, pl. xxxv, fig. 3.
 — integrifolius, Hollick, 1894 a, p. 57, pl. clxxvii, figs. 5, 8, 12.
                                       Cretaceous; Long Island, U.S.A.
- membranaceus, Lesquereux, 1868, p. 101; & 1874, p. 108, pl. xx.
                                      Dakota Group; Nebraska, U.S.A.
       fig. 6.
  — minimus, Knowlton, 1899 в, р. 659, pl. lxxvii, figs. 7-9.
                 Laramie Formation; Yellowstone National Park, U.S.A.
--- montanus, Dawson, 1886, p. 14.
                                           Mill Creek Series; Canada.
- Neillii, Dawson, 1894, p. 62, pl. xi, figs. 44, 45.
                          Upper Cretaceous; Vancouver Island, Canada.
--- obovatus, Lesquereux, 1892, p. 165, pl. xxxv, fig. 6.
                                        Dakota Group; Kansas, U.S.A.
--- ovalis, Dawson, 1886, p. 14, pl. iv, figs. 4, 8.
                                           Mill Creek Series; Canada.
— populiferus, Berry, 1906 B, p. 177; & 1906 E, p. 153, pl. xx, fig. 1.
                              Magothy Formation; New Jersey, U.S.A.
zizyphoides, Lesquereux, 1873, p. 397; & 1878 B, p. 274, pl. li,
                                Laramie Formation; Wyoming, U.S.A.
      figs. 1-6.
Palmacites canaliculatus, Schlotheim (non Heer), 1820, p. 326.
                                   Quadersandstein; Gotha, Germany.
      pl. xvi, fig. 2.
 — horridus, Heer, 1869 A, p. 15, pl. v, fig. 1.
                                      Cenomanian; Moletein, Moravia.
--- obsoletus, Schlotheim, 1820, p. 396, pl. xvi, fig. 3.
                                   Quadersandstein; Gotha, Germany.
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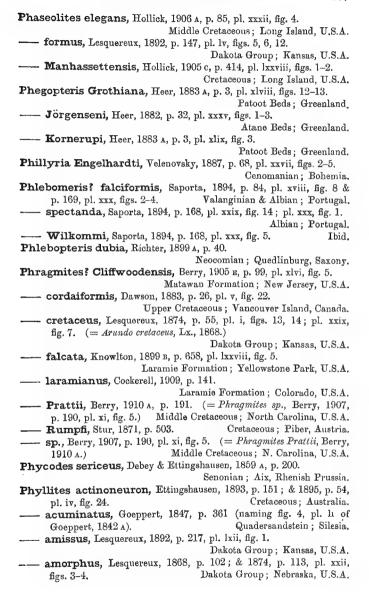


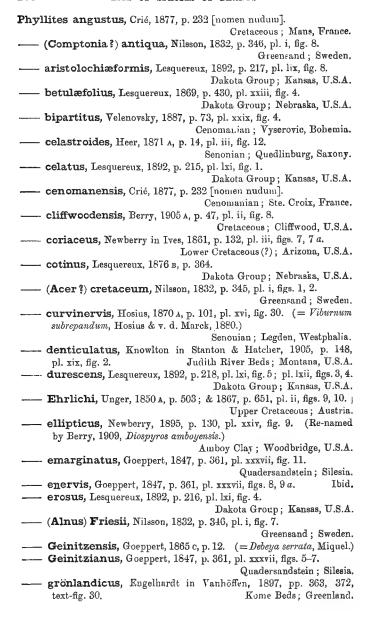
Palmoxylon variabile verum, Stenzel, 1904, p. 238, pl. xviii,
figs. 188-196; pl. xix, fig. 197. Lower Senonian; North Germany.
- Zitteli, Schenk, 1883, p. 5, pl. ii, figs. 5-6.
Cenomanian (?); Libyan Desert.
Panax cretacea, Heer, 1871, p. 1183; & 1874 A, p. 114, pl. xxxii,
figs. 9, 10. Atane Beds; Greenland.
— globulifera, Heer, 1883 A, p. 35, pl. lxii, fig. 8 b.
Patoot Beds; Greenland.
- macrocarpa, Heer, 1883 A, p. 35, pl. lxii, fig. 8. Ibid.
Pandanus Aquisgranensis, Debey in Mourlon, 1881, p. 133 [nomen
nudum]. Senonian; Limburg.
- austriacus, Ettingshausen, 1852, p. 492, pl. xxiii, fig. 1.
Senonian; Austria.
— pseudo-inermis, Ettingshausen, 1852, p. 493, pl. xxiv, figs. 1-2;
pl. xxv, fig. 1. Ibid.
— Simildæ, Stiehler, 1857, p. 454; & 1858, p. 75, pl. xiv.
Senonian; Quedlinburg, Saxony.
— trinervis, Ettingshausen, 1852, p. 494, pl. xxvi, fig. 1.
Senonian; Austria.
Paracallipteris Potoniei, Richter, 1904, p. 17, pl. i, fig. 13; & 1905,
p. 6, pl. i, fig. 13. Senonian; Quedlinburg, Saxony.
Paracedroxylon scituatense, Sinnott, 1909, p. 171, pls. lxxx, lxxxi.
Cretaceous (?); Massachusetts, U.S.A.
Paracredneria Fritschii, Richter, 1905, p. 15, pl. ii, fig. 14; pl. iii,
fig. 9. Upper Cretaceous; Westerhausen.
Parathinnfeldia dubia, Richter, 1904, p. 14, pl. i, fig. 3; & 1905,
p. 5, pl. i, fig. 3. Senonian; Quedlinburg, Saxony.
Parrotia Canfieldi, Lesquereux, 1892, p. 141, pl. xxx, fig. 6.
Dakota Group; Kansas, U.S.A.
grandidentata, Lesquereux, 1892, p. 140, pl. xxxix, figs. 2-4.
Ibid.
——? Winchelli, Lesquereux, 1892, p. 140, pl. xxix, figs. 5, 6.
Dakota Group; Minnesota, U.S.A.
Passiflora antiqua, Newberry, 1895, p. 109, pl. xxiii, fig. 7.
Amboy Clay; Woodbridge, U.S.A.
Pecopteris Andersoniana, Heer, 1874 A, p. 41, pl. iii, figs. 7, 7 b.
Kome Beds; Greenland.
— angustipennis, Fontaine, 1889, p. 87, pl. xxi, fig. 10.
Potomac Formation; Virginia, U.S.A.
arctica, Heer, 1868, p. 80, pl. i, fig. 13; pl. xliii, fig. 5.
Kome Beds; Greenland.
arenaria, Hampe, 1855, p. 12 [nomen nudum].
Senonian; Quedlinburg, Saxony. —— argutula, Heer, 1871, p. 1182; & 1874 A, p. 96, pl. xxvi, figs. 8, 8 b.
Atane Beds; Greenland.
atyrkanensis, Heer, 1878, p. 29, pl. viii, figs. 9-17.
Lower Cretaceous; Siberia,
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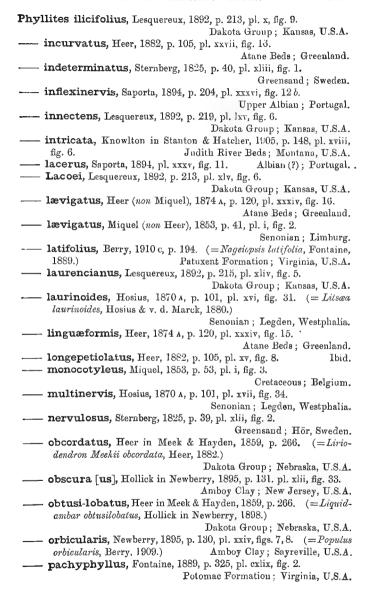


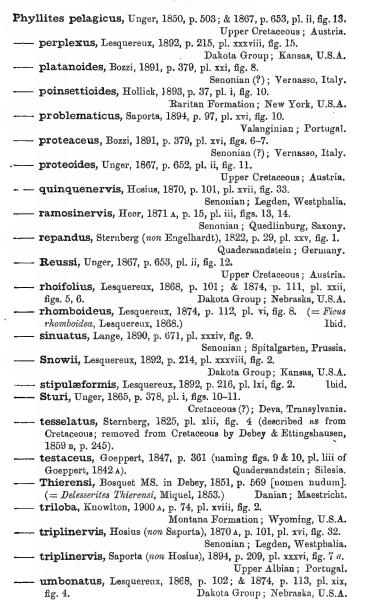


Pecopteris sp., Zeiller, 1905, p. 333, pl. vii, figs. 2, 3. Upper Cretaceous; Balkans.
— sp., Zeiller, 1905, p. 335, pl. vii, figs. 7, 7 a.
Upper Cretaceous; Balkans.
(Cladophlebis?) sp., Zeiller, 1905, p. 335, pl. vii, fig. 4. Ibid.
Periploca cretacea, Hollick, 1906 A, p. 105, pl. xl, fig. 16.
Middle Cretaceous; Martha's Vineyard, U.S.A.
Persea Hayana, Lesquereux, 1892, p. 103, pl. xvi, fig. 6.
Dakota Group; Kansas, U.S.A.
— Leconteana, Lesquereux, 1874, p. 75, pl. xxviii, fig. 1. (= Sassafras?
Leconteanum, Lesquereux, 1869, and Quercus Benzoin, Lesquereux, 1859.)  Ibid.
nebrascensis, Lesquereux, 1869, p. 431, pl. xxiii, figs. 9, 10.
(= Laurus nebrascensis, Lesquereux, 1868.)
Dakota Group; Nebraska, U.S.A.
Schimperi, Lesquereux, 1892, p. 103, pl. xvi, fig. 5.
Dakota Group; Kansas, U.S.A.
- Sternbergii, Lesquereux, 1874, p. 76, pl. vii, fig. 1. (=Ficus Stern-
bergii, Lesquereux, 1873.) Ibid.
Suessi, Krasser in Krasser & Kubart, 1906 B, p. 47 [nomen nudum].
Cenomanian; Moletein, Moravia.
— valida, Hollick, 1906 A, p. 76, pl. xxix, figs. 8, 9.
Middle Cretaceous; Long Island, U.S.A.
Perseophyllum Hauthalianum, Kurtz, 1902, p. 52.
Equivalent of Dakota Group; Patagonia.
Persoonia Lesquereuxii, Knowlton in Lesquereux, 1892, p. 89, pl. xx,
figs. 10-12. Dakota Group; Kansas, U.S.A.
spatulata, Hollick in Newberry, 1895, p. 71, pl. xlii, fig. 14.
? Amboy Cluy; U.S.A.
Petrosphæria japonica, Stopes & Fujii, 1910, pp. 4-6, pl. i, figs. 1-6.
Upper Cretaceous; Hokkaido, Japan.
Peuce aquisgranensis, Endlicher, 1847 B, p. 294. (=Pinites aquis-
granensis, Goeppert, 1842 B.) Senonian; Aix, Rhenish Prussia.
- cretacea, Endlicher, 1847 B, p. 32. (= Pinites cretacea, Corda,
1846.) Greensand; Bohemia.
Peucedanites antiquissimus, Saporta, 1890 B, p. 180, text-fig. 35.
Albian (?); Portugal.
— primordialis, Saporta, 1894, p. 194, pl. xxxv, fig. 13. Ibid.
Phacidites communis (Feistmantel), Meschinelli, 1892, p. 779. (= Phacidium commune, Feistmantel, 1874.)
Perucer Beds; Bohemia.
Phacidium circumscriptum, Bayer, 1899, p. 7, text-fig. 3. Ibid.
commune, Feistmantel, 1874, pp. 262, 266. (= Phacidites
communis, Meschinelli, 1892.) Ibid.
myrtophylli, Engelhardt, 1892 A, p. 80, pl. ii, fig. 10 a, b.
Quader; Freiberg, Saxony.
- Palæocassiæ, Ettingshausen, 1867 A, p. 242, pl. i, figs. 8, 8b.
Cenomanian; Niederschoena, Saxony.

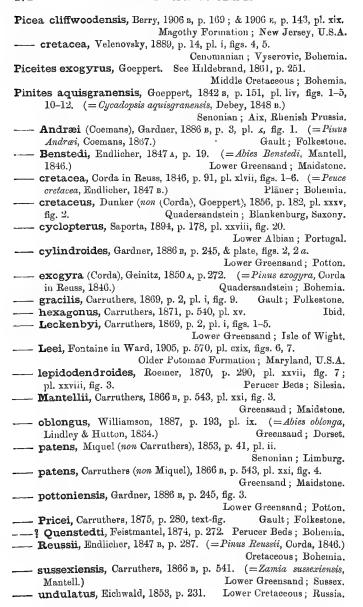




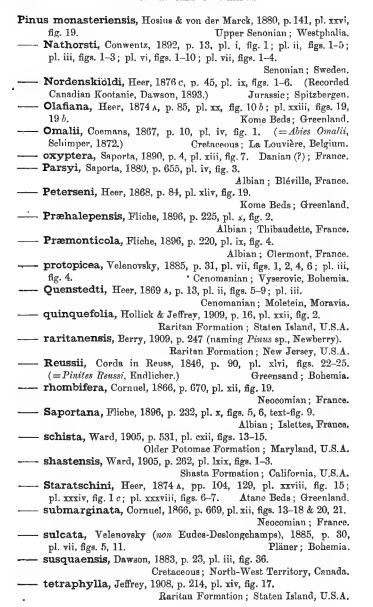


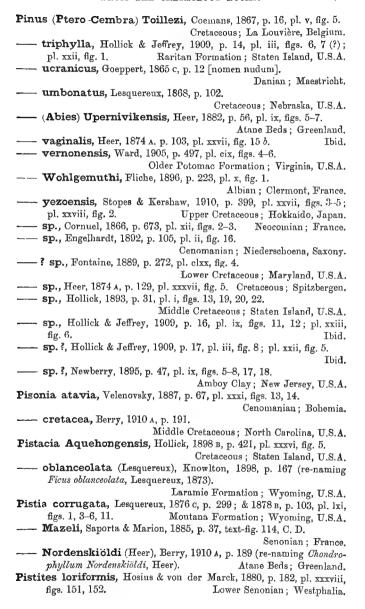


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Phyllites undulatus, Newberry, 1895, p. 131, pl. xxiv, fig. 10.
                                      Amboy Clay; Woodbridge, U.S.A.
- Vanonæ, Heer in Capellini & Heer, 1867, p. 22, pl, i, fig. 8.
                                       Dakota Group; Nebraska, U.S.A.
-- venosissimus, Newberry in Ives, 1861, p. 131, pl. iii, fig. 6.
                                 Base of Cretaceous (?); Arizona, U.S.A.
--- (Salix?) Wahlbergii, Nilsson, 1832, p. 345, pl. i, figs. 3-6.
                                                   Greensand; Sweden.
 --- Winkleri, Debey, 1848, p. 124 [nomen nudum].
                                       Senonian: Aix. Rhenish Prussia.
zamiæformis, Lesquereux, 1892, p. 38, pl. ii, fig. 7.
                                        Dakota Group; Kansas, U.S.A.
--- sp., Corda in Reuss, 1846, p. 140, pl. l, figs. 4-10; pl. li, figs. 1-8.
                                             Lower Quader: Bohemia.
--- sp., Dawson, 1887, p. 32, pl. ii, fig. 20.
                                          Laramie Formation; Canada.
--- sp., Knowlton, 1899 B, pl. lxxviii, fig. 7 (not in text).
                                              Yellowstone Park, U.S.A.
--- sp., Knowlton, 1900 A, p. 75, pl. ix, fig. 4.
                                Montana Formation: Wyoming, U.S.A.
--- sp., Knowlton, 1900 A, p. 75, pl. xix, fig. 5.
- sp., Lange, 1890, p. 672, pl. xxxiv, fig. 10.
                                       Senonian; Aix, Rhenish Prussia.
--- sp., Lesquereux, 1892, p. 216, pl. lix, fig. 7.
                                        Dakota Group: Kansas, U.S.A.
Phyllocladites crenatus, Schulze, 1888, p. 21 [nomen nudum].
                                       Senonian; Quedlinburg, Saxony,
--- rotundifolius, Heer, 1874 A, p. 124, pl. xxxv, figs. 17-21.
                                              Cretaceous; Spitzbergen.
Phyllocladopsis heterophylla, Fontaine, 1889, p. 204, pl. lxxxiv.
       fig. 5; pl. clxvii, fig. 4.
                                  Potomac Formation; Virginia, U.S.A.
Phyllocladus laciniosa, Schulze, 1888, p. 26 [nomen nudum].
                               Upper Cretaceous; Heimburg, Germany.
--- subintegrifolius, Lesquereux, 1868, p. 92; & 1874, p. 54, pl. i,
       fig. 12. (Re-named Thinnfeldia subintegrifolia (Lx.), Knowlton,
                                       Dakota Group; Nebraska, U.S.A.
       1898.)
Phyllodadoxylon antarcticum, Gothan, 1908 A, p. 4, pl. i, figs. 4-8.
                                             Cretaceous (?); Antarctica.
Phyllotæmia costulata, Saporta, 1894, p. 221, pl. xxxix, fig. 20.
                                             Cenomanian (?) : Portugal.
---- demersa, Saporta, 1894, p. 216, pl. xxxviii, fig. 6.
                                                                  Ibid.
— elongata, Saporta, 1894, p. 216, pl. xxxix, fig. 21.
                                                                  Ibid.
— nervosa, Saporta, 1894, p. 216, pl. xxxviii, figs. 7-8.
                                                                  Ibid.
— stipulacea, Saporta, 1894, p. 217, pl. xxxviii, figs. 12-13.
                                                                  Ibid.
Phymatoderma Lemerianum, Brongniart, 1849 A, p. 10.
                                                        Gault; France.
Picea albertensis, Penhallow, 1908, p. 82.
                                  Judith River Series; Alberta, Canada.
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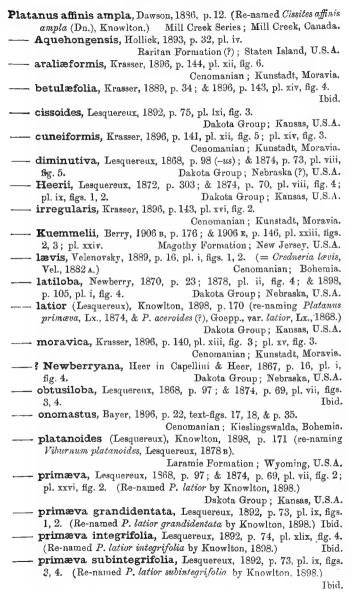
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Pinites sp., Roemer, 1870, p. 301, pl. xxx, fig. 2.
                                              Turonian ; Upper Silesia.
Pinostrobus prolongatus, Feistmantel, 1874, p. 272.
                                               Perucer Beds : Bohemia.
  - vallidus, Feistmantel, 1874, p. 272.
                                                                  Ibid.
Pinus Andræi, Coemans, 1867, p. 12, pl. iv, fig. 4; pl. v, fig. 1.
      (=Pinites Andræi (Coemans), Gardner, 1886 B.)
                                     Cretaceous; La Louvière, Belgium.
- anthraciticus, Dawson, 1893, p. 89, text-fig. 10.
                   Kootanie Formation; North-West Territory, Canada.
 --- Argonnensis, Fliche, 1896, p. 217, pl. ix, fig. 3. [Cones.]
                                             Albian : Clermont, France.
--- aspera, Cornuel, 1866, p. 671, pl. xii, figs. 6-12.
                                                   Neccomian; France.
- Briarti, Coemans, 1867, p. 10, pl. iv, fig. 2.
                                     Cretaceous; La Louvière, Belgium.
— (Cedrus) Corneti?, Coemans, 1867, p. 11, pl. iv, fig. 3.,
--- Crameri, Heer, 1868, p. 84, pl. xliv, figs. 7-18.
                                                Kome Beds: Greenland.
---- delicatulus, Berry, 1904 A, p. 68, pl. i,fig. 12.
                               Matawan Formation; New Jersey, U.S.A.
--- depressa, Coemans, 1867, p. 15, pl. v, fig. 4.
                                     Cretaceous; La Louvière, Belgium.
Eirikiana, Heer, 1874 A, p. 85, pl. ii, fig. 1; pl. xvii, figs. 6, 7;
       pl. xviii, fig. 2 b; pl. xxiii, fig. 16.
                                               Kome Beds; Greenland.
  -- elongata, d'Orbiguy, 1852, p. 617; & Cornuel, 1882, p. 260, pl. vii,
       fig. 1.
                                                  Aptian; Saint-Dizier.
 exogyra, Corda in Reuss, 1846, p. 91, pl. xlviii, figs. 16-18.
       (=Pinites exogyra, Geinitz, 1850 A.)
                                                  Greensand; Bohemia.
   - familiaris, Brougniart, 1828 A, p. 107. (= Conites familiaris,
       Sternberg, 1825.)
----- gibbosa, Coemans, 1867, p. 13, pl. v, fig. 2.
                                     Cretaceous; La Louvière, Belgium.
- gracilis, Cornuel, 1866, p. 671, pl. xii, figs. 4, 5.
                                                   Neocomian; France.
   Guill(i)eri, Crié, 1884, p. 512.
                                                    Cretaceous; France.
— Heeri, Coemans, 1867, p. 14, pl. v, fig. 3.
                                      Cretaceous; La Louvière, Belgium.
 ---- lingulata, Heer, 1874 A, p. 84, pl. xii, fig. 10 d; pl. xxxiii, fig. 18.
                                                Kome Beds; Greenland.
 -- longissima, Velenovsky, 1885, p. 29, pl. i, figs. 14-17.
                                                Perucer Beds; Bohemia.
 — macrostrobilina, Menzel, 1908, p. 27, pl. ii, figs. 1, 1 a, 1 b.
                                             Quadersandstein; Bohemia.
 ---- mammilifer, Saporta, 1880, p. 654, pl. iv, fig. 2.
                                              Aptian; Cauville, France.
- mattewanensis, Berry, 1903 c, p. 680, text-fig. 4 on p. 678.
                               Matawan Formation; New Jersey, U.S.A.
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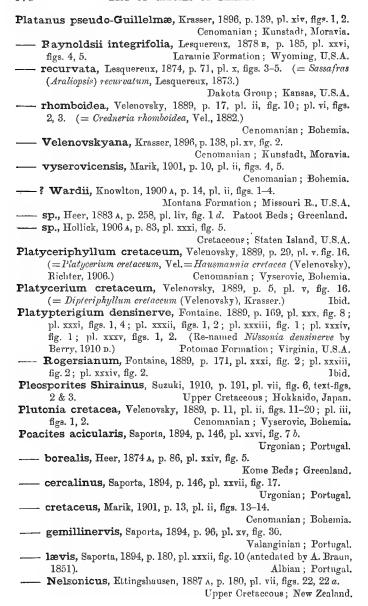


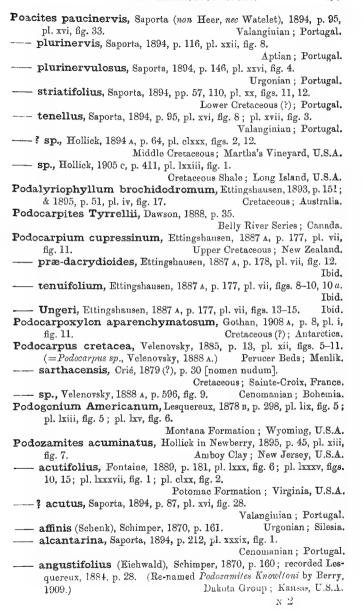


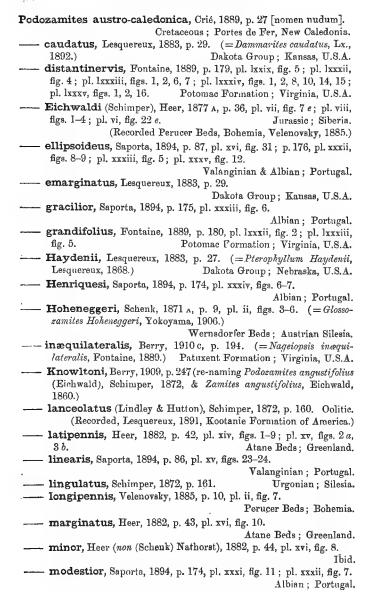
Pitcarnia primæva, Hosius & von der Marck, 1880, p. 217, pl. xliv, Neocomian; Westphalia. figs, 210, 211. Pityoidolepis statenensis, Hollick & Jeffrey, 1909, p. 53, pl. ix, figs. 13. 14: pl. xxvii, figs. 1-3. Raritan Formation; Staten Island, U.S.A. Pitvoxylon Argonnense, Fliche, 1896, p. 253. Albian; France. - Hollicki, Knowlton in Hollick, 1898 p, p. 134, text-figs. 1, 2. Upper Cretaceous; New Jersey, U.S.A. — infracretaceum, Fliche, 1896, p. 251, pl. xii, fig. 1; pl. xvi, figs. 1, 2. Albian : Clermont, France. - piceoides (cretaceum), Vater, 1884, p. 821. Lower Senonian (?); Brunswick. - scituatense, Jeffrey & Chrysler, 1906, p. 11, pl. ii, figs. 8-12. Cretaceous (?); Massachusetts, U.S.A. - statenense, Jeffrey & Chrysler, 1906, p. 8, pl. i; pl. ii, fig. 7. Middle Cretaceous; Staten Island, U.S.A. — Thomasi, Fliche, 1896, p. 254, pl. xvi, fig. 3. Albian; Triancourt, France. Pitys familiaris, Unger, 1845, p. 197. (= Conites familiaris, Sternberg, 1825.)Planera antiqua, Heer, 1883 A, p. 26, pl. lv, figs. 11-12. Patoot Beds; Greenland. — antiqua, Newberry, 1895, p. 69, pl. xlii, figs. 1-4. occupied, =P, Knowltoniana, Hollick.) Amboy Clay; New Jersey, U.S.A. --- betuloides, Hollick, 1906 A. p. 57, pl. viii, fig. 22. Middle Cretaceous; Martha's Vineyard, U.S.A. --- cretacea, Berry, 1907, p. 193, pl. xi, figs. 7, 8. Middle Cretaceous; North Carolina, U.S.A. --- Knowltoniana, Hollick in Newberry, 1895, p. 69, pl. xlii, figs. 1-4. Amboy Clay; New Jersey, U.S.A. Plantaginopsis marylandica, Fontaine in Ward, 1905, p. 561, pl. exvii, fig. 7; pl. exviii, figs. 1, 2. Older Potomac Formation; Maryland, U.S.A. Platæanthus (Williamsonia) problematicus, Newberry, 1895, p. 125, pl. xxxv, figs. 1-9. Amboy Clay; New Jersey, U.S.A. Plataninium subaffine, Vater, 1884, p. 843, pl. xxix, figs. 19-21. Lower Senonian (?); Brunswick. Platanophyllum crassinerve, Fontaine, 1889, p. 316, pl. clviii, fig. 5. Potomac Formation; Virginia, U.S.A. Platanus aceroides? latior (Goeppert), Lesquereux, 1868, p. 97. Dakota Group; Nebraska, U.S.A. (=P, latior, Knowlton, 1898.)--- acute-triloba, Krasser, 1889, p. 34; & 1896, p. 142, pl. xiii, fig. 2. Cenomanian; Kunstadt, Moravia. --- affinis, Lesquereux, 1874, p. 71, pl. iv, fig. 4. (= Populites affinis, Lx., 1873, & Cissites affinis, Lx., 1876.)

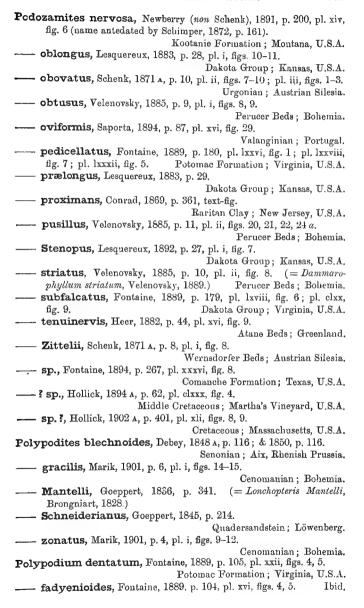
Dakota Group; Kansas, U.S.A.





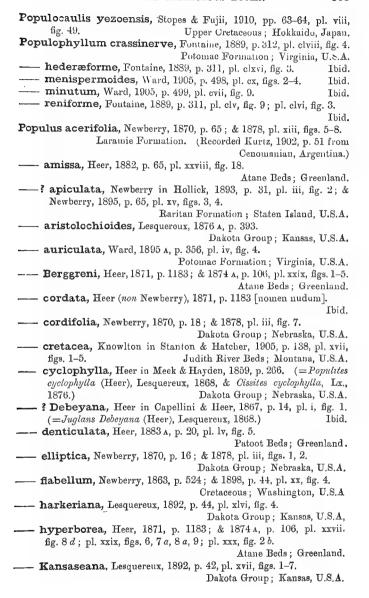


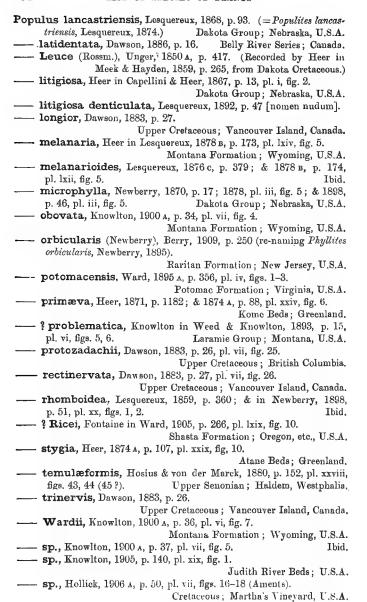




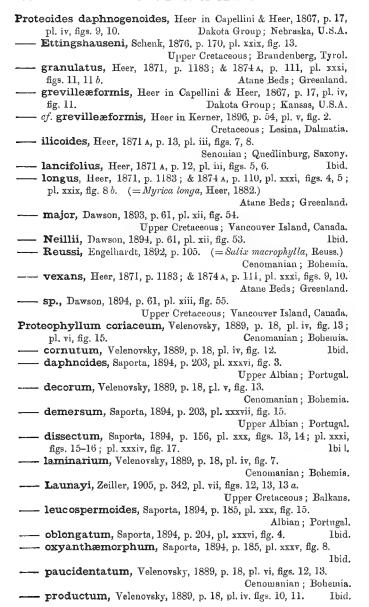
Polypodium Graahianum, Heer, 1883 a, p. 3, pl. xlviii, figs. 4, 4 b, 5 b, 5 bb. Patoot Beds; Greenland. Hcchstetteri, Unger, 1866, p. 5, pl. ii, figs. 1, 2. Lower Cretaceous (?); New Zealand. Polystichum Hillsianum, Hollick, 1902, p. 146, pl. iv, fig. 7. Laramie Formation; Colorado, U.S.A. Polytænia quinquesecta, Saporta & Marion, 1885, p. 117, text-lig. 125 A. Turonian; France. Populites affinis, Lesquereux, 1873, p. 423. (= Platanus affinis, Lx., 1874, & Cissites affinis, Lx., 1876.) Dakota Group; Kansas, U.S.A. - amplus, Knowlton in Stanton & Hatcher, 1905, p. 140, pl. xviii, Judith River Beds; Montana, U.S.A. fig. 1. - cuneatus, Lesquereux in Saporta & Marion, 1878, p. 10 [nomen nudum]. Dakota Group; U.S.A. - cyclophylla (Heer), Lesquereux, 1868, p. 93. (= Populus cyclophylla, Heer, 1858, & Cissites cyclophylla, Lx., 1876.) Dakota Group; Nebraska, U.S.A. — elegans, Lesquereux, 1868, p. 94; & 1895, p. 10, pl. A, fig. 2; pl. B, fig. 1. 1bid. - fagifolia, Lesquereux, 1873, p. 422. Dakota Group; Kansas, U.S.A. -- flabellata, Lesquereux, 1868, p. 94. (Re-named Greuiopsis flabellata by Knowlton, 1898.) Dakota Group; Nebraska, U.S.A. — lancastriensis, Lesquereux, 1874, p. 58, pl. iii, fig. 1. (=Populus lancastriensis, Lesquereux, 1868.) - litigiosus (Heer), Lesquereux, 1892, p. 46, pl. vii, fig. 7; pl. viii, fig. 5; pl. xlvi, fig. 6; pl. xlvii, fig. 1. (= Populus litigiosa, Heer, Dakota Group; Kansas, U.S.A. --- microphyllus, Lesquereux, 1869, p. 430, pl. xxiii, figs. 2, 3. Dakota Group; Nebraska, U.S.A. - ovata, Lesquereux, 1868, p. 94. (= Ampelophylium ovatum, Lx., Ibid. 1876.) - probalsamifera, Dawson, 1894, p. 57, pl. vii, fig. 23. Upper Cretaceous; Vancouver Island, U.S.A. — quadrangularis, Lesquereux, 1868, p. 94. (=Hamamelitesquadrangularis, Lesquereux, 1876, and Alnites quadrangularis, Lesquereux, 1874.) Dakota Group; Kansas, U.S.A. - salinæ, Lesquereux, 1873, p. 423. (Re-named Menispermites Ibid. salinæ by Knowlton, 1898.) — salisburiæfolia, Lesquereux, 1868, p. 94. (= Cissites salisburiæfolius, Lx., 1883.) Dakota Group; Nebraska, U.S.A. - Sternbergii, Lesquereux, 1892, p. 45, pl. vii, figs. 8, 9. Dakota Group; Kansas, U.S.A. --- tenuifolius, Berry, 1905 E, p. 69, pl. xlix, fig. 7. Matawan Formation; New Jersey, U.S.A. - Winchelli, Lesquereux, 1895, p. 12, pl. B, fig. 2.

Dakota Group; Minnesota, U.S.A.





Posidonia cretacea, Hosius & von der Marck, 1880, p. 134, pl. xxiv,
figs. 7, 8, 9. Upper Senonian; Westphalia.
Potamogeton cretaceus, Heer, 1883 A, p. 19, pl. lv, figs. 23–24.
Patoot Beds; Greenland.
priscus, Feistmantel, 1874, p. 274. Perucer Beds; Bohemia.
Potamogetophyllum vernonense, Fontaine in Ward, 1905, p. 500,
pl. cix, fig. 7. Older Potomac Formation; Virginia, U.S.A.
Premna exul, Velenovsky, 1882 A, p. 213 [nomen nudum].
Cretaceous; Bohemia.
Premnophyllum exulum, Velenovsky, 1839, p. 24. (= Cissophyllum
exulum, Velenovsky, on same page.) Cenomanian; Bohemia.
trigonum, Velenovsky, 1886, p. 51, pl. xviii, fig. 2. Ibid.
Prepinus japonicus, Stopes & Kershaw, 1910, p. 396, pl. xxvii, figs. 1, 2;
— statenensis, Jeffrey, 1908, p. 209, pl. xiii.
Ruritan Formation; Staten Island, U.S.A.
— viticetensis, Jeffrey, 1910 c, p. 336, pl. xxxiii.
Magothy or Upper Potomac; Staten Island, U.S.A.
Protea Haidingeri, Ettingshausen, 1867 A, p. 254, pl. ii, fig. 12.
Cenomanian; Niederschoena, Saxony.
Proteæphyllum californicum, Fontaine, 1905 A, p. 267, pl. lxix,
fig. 11. Shasta Formation; California, U.S.A.
dentatum, Fontaine, 1889, p. 286, pl. clvi, fig. 7; pl. clxxii,
figs. 1, 4; pl. clxxiii, figs. 12, 14.
Potomac Formation; Maryland, U.S.A.
ellipticum, Fontaine, 1889, p. 285, pl. cxlii, figs. 1, 2.
Potomac Formation; Virginia, U.S.A.
oblongifolium, Fontaine, 1889, p. 284, pl. exxxix, fig. 5; pl. exl.
figs. 1, 2. Ibid.
- orbiculare, Fontaine, 1889, p. 283, pl. exxxix, fig. 4. Ibid.
ovatum, Fontaine, 1889, p. 285, pl. cxli, fig. 1. Ibid.
reniforme, Fontaine, 1889, p. 282, pl. exxxix, fig. 3; pl. clvi,
fig. 4; pl. clx, figs. 1, 2.
tenuinerve, Fontaine, 1889, p. 286, pl. cl, fig. 13; pl. clvi, fig. 2.
Ibid.
— Uhleri, Fontaine in Ward, 1905, p. 564, pl. exviii, fig. 5.
Older Potomac Formation; Maryland, U.S.A.
sp.?, Fontaine, 1889, p. 284, pl. cxxxix, fig. 2.
Potomac Formation: Virginia, U.S.A.
Proteoides acuta, Heer in Capellini & Heer, 1867, p. 17, pl. iv,
figs. 7, 8. Dakota Group; Kansas, U.S.A.
Upper Cretaceous; Brandenberg, Tyrol.
— australiensis, Ettingshausen, 1893, pp. 140, 149; & 1895, p. 26,
pl. iii, fig. 16. Cretaceous; Australia.
- crassipes, Heer (non Ettingshausen & Gardner), 1871, p. 1183; &
1874 A, p. 110, pl. xxxi, figs. 6-8 a. (=Ficus crassipes, Heer, 1882.)
Atane Beds; Greenland.

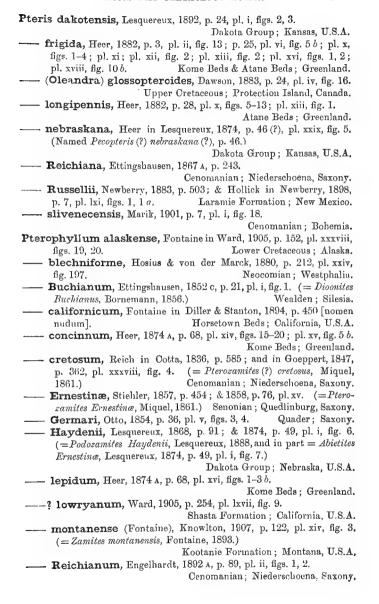


Proteophyllum Saportanum, Velenovsky, 1889, p. 18, pl. v, fig. 14.
Cenomanian; Bohemia.
trifidum, Velenovsky, 1889, p. 18, pl. vi, fig. 14; pl. v, fig. 15.
Ibid.
truncatum, Saporta, 1894, p. 203, pl. xxxvii, fig. 16.
Upper Albian; Portugal.
Proteopsis Proserpinæ, Velenovsky, 1889, p. 19, pl. i, figs. 6-9.
Cenomanian; Vyserovic, Bohemia.
Protocyathea trichinopoliensis, Feistmantel, 1877, p. 136, pl. i,
figs. 1-2. Neocomian (?); India.
Ungeri (Unger), Feistmantel, 1877, p. 136 [nomen nudum =
Caulopteris cyatheoides, Unger]. Neocomian; Austria.
Protodammara speciosa, Hollick & Jeffrey, 1906, p. 199, pl. i,
figs. 5-13; pl. ii, figs. 1-5. (=Dammara minor, Hollick.)
Raritan Formation; Staten Island, U.S.A.
Protophyllocladus lanceolatus (Knowlton), Berry, 1903 p, p. 441
(re-naming Thinnfeldia lanceolata, Knowlton, 1893).
Laramie Formation; Montana, U.S.A.
polymorphus (Lesquereux), Berry, 1903 p, p. 442 (re-naming
Salisburia polymorpha, Lesquereux, 1859, & Thinnfeldia polymorpha,
Knowlton, 1898).
— subintegrifolius (Lesquereux), Berry, 1903 A, p. 440; & 1904,
p. 69, pl. i, fig. 5 (re-naming Thinnfeldia subintegrifolia (Lx.),
Knowlton, 1898, & Thinnfeldia Lesquereuxiana, Heer, & Phyllo-
cladus subintegrifolius, Lesquereux).
Cretaceous; Staten Island, U.S.A.
Protophyllum boreale, Dawson, 1883, p. 23, pl. iv, fig. 13.
Upper Cretaceous; North-West Territory, Canada.
crassum, Lesquereux, 1892, p. 193, pl. lxv, fig. 4.
Dakota Group; Kansas, U.S.A.
— crednerioides, Lesquereux, 1876 в, р. 363, pl. iii, fig. 1; pl. viii,
fig. 4. Ibid.
— crenatum, Knowlton in Lesquereux, 1892, p. 190, pl. lxv, fig. 7.
Ibid,
— denticulatum, Lesquereux, 1892, p. 193, pl. xxxvi, fig. 9. Ibid.
— dimorphum, Lesquereux, 1892, p. 190, pl. xli, fig. 1. Ibid.
Haydenii, Lesquereux, 1874, p. 106, pl. xvii, fig. 3 (=Pterospermites
Haydenii, Lesquereux, 1872).
— integerrimum, Lesquereux, 1892, p. 192, pl. xliii, fig. 3; & 1895,
p. 21, pl. B, figs. 10, 11. Dakota Group; Minnesota, U.S.A.
Leconteanum, Lesquereux, 1874, p. 103, pl. xvii, fig. 4; pl. xxvi,
fig. 1. (= Credneria Le Conteana, Lesquereux, 1868.)
Dakota Group; Kansas, U.S.A.
minus, Lesquereux, 1874, p. 104, pl. xix, fig. 2; pl. xxvii, fig. 1.
Ibid.
— <b>Mudgii</b> , Lesquereux, 1874, p. 106, pl. xviii, fig. 3. (= Quercus
Mudgii, Lx., 1872.)

Protophyllum multinerve, Lesquereux, 1874, p. 105, pl. xviii, fig. 1.
(=Pterospermites multinervis, Lesquereux, 1872.)
Dakota Group; Kansas, U.S.A.
Nanaimo, Dawson, 1883, p. 28, pl. viii, fig. 35.
Upper Cretaceous; Vancouver Island, Canada.
nebrascense, Lesquereux, 1874, p. 103, pl. xxvii, fig. 3.
Dakota Group; Nebraska, U.S.A. — obovatum, Newberry, 1895, p. 128, pl. xxxviii, fig. 4. (=Ptero-
spermites obovatus, Berry, 1909.) Amboy Clay; Woodbridge, U.S.A.
—— præstans, Lesquereux, 1892, p. 188, pl. xli, figs. 2, 3; pl. xlii,
figs. 3, 4. Dakota Group; Kansas, U.S.A.
— pseudospermoides, Lesquereux, 1892, p. 194, pl. lix, fig. 2. Ibid.
— pterospermifolium, Lesquereux, 1892, p. 195, pl. lix, fig. 1.
Ibid.
— quadratum, Lesquereux, 1874, p. 104, pl. xix, fig. 1. (=Ptero-
spermites quadratus, Lesquereux, 1872.) Ibid.
querciforme, Hollick, 1895, p. 227, pl. ccxxxvii, fig. 1. Ibid.
rugosum, Lesquereux, 1874, p. 105, pl. xvii, figs. 1-2; pl. xix,
fig. 3. (=Pterospermites rugosus, Lesquereux, 1873.) Ibid.
Sternbergii, Lesquereux, 1874, p. 101, pl. xvi; pl. xviii, fig. 2.
(=Pterospermites Sternbergii, Lesquereux, 1873.) Ibid.
Upper Cretaceous: Vancouver Island, Canada.
Upper Cretaceous; Vancouver Island, Canada.  Protopteris Buvignieri, Brongniart, 1849 A. p. 111 [nomen nudum].
Upper Cretaceous; Vancouver Island, Canada.  Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  — Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  Turonian; Oppeln.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  — Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  — Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  — Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  Turonian; Oppeln.  — Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  Turonian; Oppeln.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25. Turonian; Oppeln.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv,
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25. Turonian; Oppeln.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, =Dicksonia
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  — Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25. Turonian; Oppeln.  — Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  — fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  — punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, = Dicksonia punctata, Heer.)  Greensand; Bohemia.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25. Turonian; Oppeln.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, = Dicksonia punctata, Heer.)  Greensand; Bohemia.  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulo-
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25. Turonian; Oppeln.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, =Dicksonia punctata, Heer.)  Greensand; Boliemia.  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulopteris Singeri, Goeppert, 1836, removed from Cretaceous by Debey &
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, =Dicksonia punctata, Heer.)  Greensand; Bohemia.  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulopteris Singeri, Goeppert, 1836, removed from Cretaceous by Debey & Ettingshausen, 1859 B, p. 245.)  Cretaceous; Bohemia.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, =Dicksonia punctata, Heer.)  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulopteris Singeri, Goeppert, 1836, removed from Cretaceous by Debey & Ettingshausen, 1859 B, p. 245.)  Cretaceous; Bohemia.  Sternbergii, Corda, 1845, p. 77, pl. xlviii, fig. 1.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, =Dicksonia punctata, Heer.)  Greensand; Bohemia.  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulopteris Singeri, Goeppert, 1836, removed from Cretaceous by Debey & Ettingshausen, 1859 B, p. 245.)  Cretaceous; Bohemia.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, =Dicksonia punctata, Heer.)  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulopteris Singeri, Goeppert, 1836, removed from Cretaceous by Debey & Ettingshausen, 1859 B, p. 245.)  Cretaceous; Bohemia.  Sternbergii, Corda, 1845, p. 77, pl. xlviii, fig. 1.  Wohlegemuthi, Fliche, 1896, p. 132, pl. i, fig. 2.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25. Turonian; Oppeln.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, =Dicksonia punctata, Heer.)  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulopteris Singeri, Goeppert, 1836, removed from Cretaceous by Debey & Ettingshausen, 1859 B, p. 245.)  Sternbergii, Corda, 1845, p. 77, pl. xlviii, fig. 1. Ibid.  Wohlegemuthi, Fliche, 1896, p. 132, pl. i, fig. 2.  Albian; Clermont, France.  Protorhipis cordata, Heer, 1882, p. 10, pl. iii, fig. 11. (=Hausmannia cordata (Heer), Richter, 1906.)  Kome Beds; Greenland.
Protopteris Buvignieri, Brongniart, 1849 A, p. 111 [nomen nudum].  Lower Cretaceous; France.  Cotteana, Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 4-6; pl. lxvii; & Stenzel, 1886, p. 25. Turonian; Oppeln.  Duplessyana, Saporta, 1880, p. 646, pl. ii; pl. iii, figs. 1, 2.  Albian; Havre, France.  fibrosa, Stenzel, 1886, p. 25, pl. iii, figs. 30-36. Turonian; Oppeln.  punctata, (Sternberg), Presl in Sternberg, 1838, p. 170, pl. lxv, figs. 1-3. (=Lepidodendron punctata, Sternberg, 1820, = Dicksonia punctata, Heer.)  Singeri, Presl in Sternberg, 1838, p. 171, pl. lxv, fig. 7. (=Caulopteris Singeri, Goeppert, 1836, removed from Cretaceous by Debey & Ettingshausen, 1859 B, p. 245.)  Sternbergii, Corda, 1845, p. 77, pl. xlviii, fig. 1. Ibid.  Wohlegemuthi, Fliche, 1896, p. 132, pl. i, fig. 2.  Albian; Clermont, France.  Protorhipis cordata, Heer, 1882, p. 10, pl. iii, fig. 11. (=Hausmannia cordata (Heer), Richter, 1906.) Kome Beds; Greenland.  Fisheri, Knowlton, 1907, p. 114, pl. xii, fig. 3.
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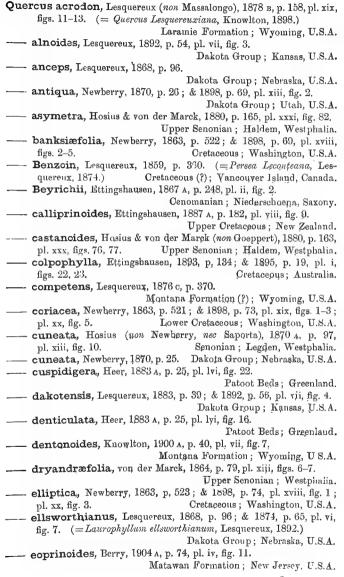
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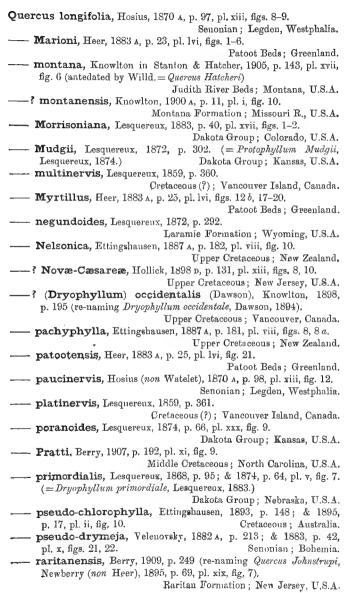


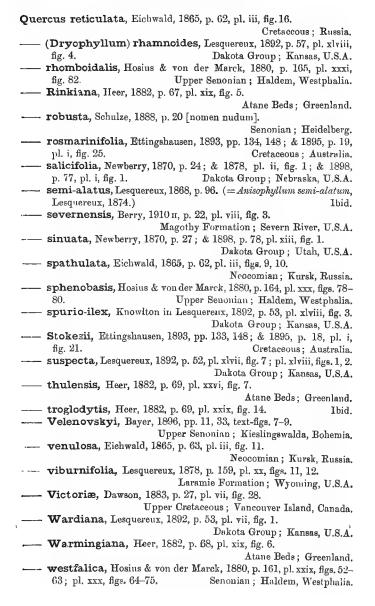
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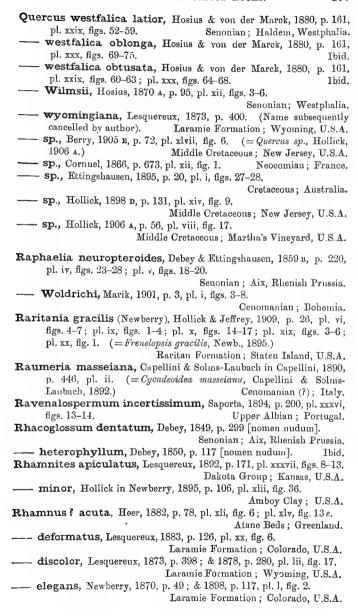
Lower Cretaceous; Black Hills, U.S.A.



Quercus eucalyptoides, Ettingshausen, 1893, pp. 140, 148; & 1895, p. 18, pl. i, fig. 26. Cretaceous; Australia. euryphylla, Hosius & von der Marck, 1880, p. 160, pl. xxviii, figs. 48, 49, 50; pl. xxix, fig. 51. Upper Senonian; Haldem, Westphalia. - ferox, Heer, 1882, p. 68, pl. xix, fig. 7. · Atane Beds; Greenland. --- flexuosa, Newberry, 1863, p. 521; & 1898, p. 74, pl. xix, figs. 4-6. Cretaceous; Washington, U.S.A. - formosa, Hosius & von der Marck, 1880, p. 164, pl. xxxi, fig. 81. Upper Senonian; Haldem, Westphalia. — glascoena, Lesquereux, 1892, p. 55, pl. vi, fig. 6. Dakota Group; Kansas, U.S.A. --- gracilis, Newberry (non Saporta), 1883, p. 504; & 1898, p. 75, pl. lxvii, fig. 4. Montana Formation; Wyoming, U.S.A. --- Hatcheri, Knowlton, 1906, Proc. Biol. Soc. Washington, vol. xxix, p. 95. (= Quercus montana, Knowlton, non Willd.) Judith River Beds; Montana, U.S.A. -- hexagona, Lesquereux, 1868, p. 95; & 1874, p. 64, pl. v. fig. 8. Dakota Group; Nebraska, U.S.A. - hieracifolia (Debey), Hosius & von der Marck, 1880, p. 166, pl. xxxi, figs. 85-88. (=Dryandroides hieraciifolia, Debey in litt.) Upper Senonian; Westphalia. --- Hollickii, Berry, 1905 E, p. 71, pl. li, figs. 1, 2. Matawan Formation; New Jersey, U.S.A. — Holmesii, Lesquereux, 1892, p. 58. (= Dryophyllum (Quercus) Holmesii, Lesquereux, 1883.) Upper Cretaceous; Vancouver, Canada, — (Dryophyllum) Hosiana, Lesquereux, 1892, p. 57, pl. iii, fig. 14. Dakota Group; Kansas, U.S.A. - ? iliciformis, Hosius & von der Marck (non Saporta), 1880, p. 165, pl. xxxi, fig. 84. Upper Senonian; Haldem, Westphalia, --- Johnstrupi, Heer, 1883 A, p. 24, pl. lvi, figs. 7-11, 11 b, 12 α. Patoot Beds: Greenland. - Judithæ, Knowlton in Stanton & Hatcher, 1905, p. 143, pl. xviii, Judith River Beds; Montana, U.S.A. fig. 2. - kanseana (Lx.), Knowlton, 1898, p. 194 (re-naming Hamamelites kansaseana, Lesquereux., 1876 B, and Alnus kanseana. Lx., 1878.) Dakota Group; Kansas, U.S.A. ---- Langeana, Heer, 1883 A, p. 24, pl. lvi, figs. 13-15. Patoot Beds; Greenland. - latifolia, Lesquereux, 1892, p. 58. (= Dryophyllum latifolium, Lesquereux, 1876.) Dakota Group; Kansas, U.S.A. --- latissima, Hosius, 1870 A, p. 97, pl. xiii, fig. 11. Senonian; Legden, Westphalia. --- Legdensis, Hosius, 1870 A, p. 97, pl. xiii, fig. 7. Ibid; --- Lesquereuxiana, Knowlton, 1898, p. 194; & 1900 A, p. 39, 11. vii, fig. 1 (re-naming Quercus acrodon, Lesquereux, 1878 B). Montana Formation : Wyoming, U.S.A.







Rhamnus inæquilateralis, Lesquereux, 1892, p. 170, pl. xxxvii, figs. 4-7. Dakota Group; Kansas, U.S.A. — Mudgei, Lesquereux, 1892, p. 169, pl. xxxvii, figs. 2, 3. — Novæ-Cæsareæ, Berry, 1905 E, p. 85, pl. 1, figs. 5, 6. Matawan Formation; New Jersey, U.S.A. — obovatus, Lesquereux, 1868, p. 207; & 1878 B, p. 281, pl. liv, figs. 1, 2. Laramie Formation; New Mexico, U.S.A. — Oerstedi, Heer, 1882, p. 98, pl. xxi, figs. 9, 10. Atane Beds; Greenland. — Pfaffiana, Heer, 1883 A, p. 42, pl. lxiv, fig. 8. Patoot Beds; Greenland. ---- prunifolius Lesquereux, 1883, p. 85; & 1892, p. 169, pl. xxxv, Dakota Group; Kansas, U.S.A. fig. 14. --- revoluta, Lesquereux, 1892, p. 171, pl. lxv, fig. 5. --- Rossmaessleri, Unger, 1850 A, p. 464. (Recorded Hollick, 1893, Cretaceous, U.S.A.) — salicifolius, Lesquereux, 1868 A, p. 206; & 1878 B, p. 282, pl. liii, figs. 9, 10. Laramie Formation; Colorado, U.S.A. — similis, Lesquereux, 1892, p. 168, pl. xxxv, figs. 12, 13. Dakota Group; Kansas, U.S.A. --- tenax, Lesquereux, 1868, p. 101; & 1874, p. 109, pl. xxi, fig. 4. Dakota Group; Nebraska, U.S.A. - sp. ?, Hosius & von der Marck, 1880, p. 175, pl. xxxvi, fig. 131. Upper Senonian; Haldem, Westphalia. Rhizocaulon elongatum, Saporta, 1894, p. 94, pl. xv, figs. 5-6; & p. 146, pl. xxvi, fig. 6. Valanginian & Urgonian; Portugal. najadinum, Vater, 1884, p. 833, pl. xxvii, fig. 6. Lower Senonian (?); Helmstedt. --- vetus, Saporta, 1890 A, p. 814; 1894, p. 94, pl. xv, fig. 4; pl. xvi, Valanginian; Portugal. fig. 7. Rhizodendron oppoliense, Goeppert, 1865 B, p. 397; & in Stenzel. 1886, p. 5, pl. i, figs. 1, 3, 5-12; pl. ii; pl. iii, figs. 20-29. (=Rhizopterodendron oppoliense, Goeppert, 1881, = Caulopteris oppoliensis, Stenzel, 1897.) Turonian; Oppeln. Rhizopterodendron oppoliense, Goeppert, 1881, p. 3. (=Rhizodendren oppoliense, Goeppert, 1865 B.) Turonian; Silesia. Rhodomela diluviana, Agardh, 1824, p. 201. (=Fucoides strictus, Brongniart, 1824.) Rhodomelites strictus (Agardh MS.), Sternberg, 1833, p. 25. (= Fucoides structus, Brongniart, 1824, = Sphærococcites strictus, Brongniart, 1828.) Cretaceous; La Rochelle, France. Rhodomenites Mantelli, Debey in Debey & Ettingshausen, 1859 A, p. 207. (=Sphærococcites Mantelli, Roemer, 1841.) Pläner; Saxony. Rhoidium Ungeri, Mercklin, 1855, p. 21, pl. i, figs. 1, 2; pl. ii. Greensand: Russia. Rhopala primæva, Ettingshausen, 1867 A, p. 255, pl. iii, fig. 5. Cenomanian; Niederschoena, Saxony.

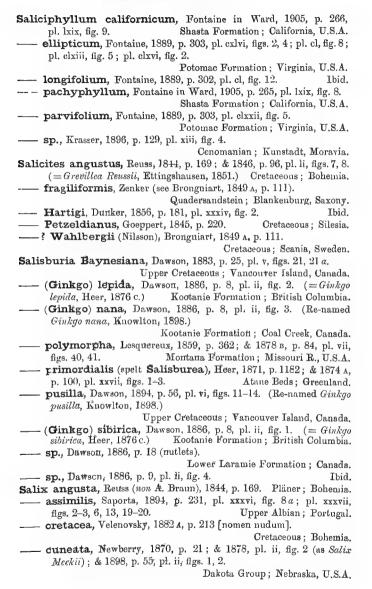
Cretaceous; Australia.

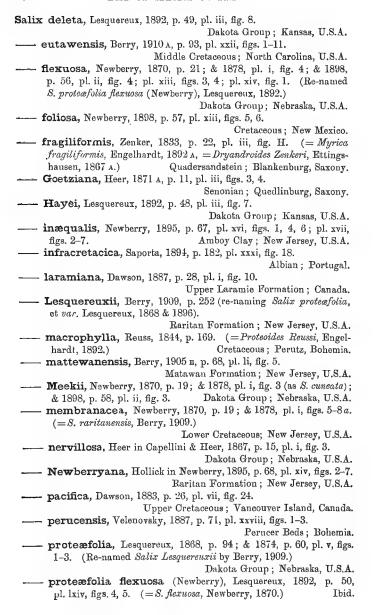
- primævum, Ettingshausen, 1895, p. 2 [non en nudum]. Rhus antiqua, Bozzi, 1891, p. 377, pl. xvi, fig. 4. Cretaceous (?); Italy. - cretacea, Bozzi (non Heer, nec Velenovsky) in Tommasi, 1892, p. 1119

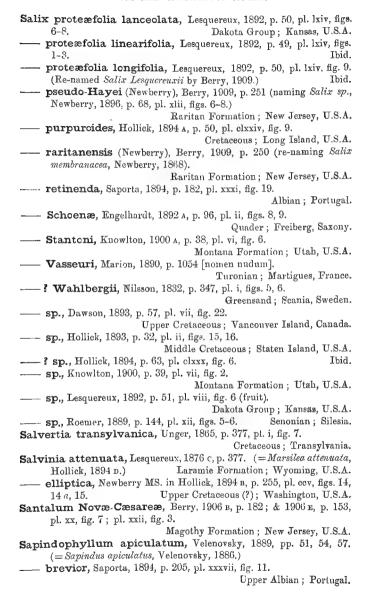
p. 28, pl. iii, figs, 12, 13.

[nomen nudum]. Senonian (?); Italy. - cretacea, Heer (non Velenovsky), 1871 A, p. 14, pl. iii, fig. 11. Senonian; Quedlinburg, Saxony. --- cretacea, Velenovsky (non Heer), 1887, p. 68, pl. xxvii, figs. 7-12. Cenomanian; Bohemia. - dens mortis, Bayer, 1893, pp. 19, 42, fig. 13; & Bayer in Fritsch, 1893, p. 130, text-fig. 185. Cenomanian; Priesen, Bohemia. — evansii, Lesquereux, 1872, p. 293. Laramie Formation; Wyoming, U.S.A. — membranacea, Lesquereux, 1876 A, p. 369; & 1878 B, p. 292, pl. lxiv, figs. 6, 7. Montana Formation (?); Wyoming, U.S.A. — microphylla, Heer, 1874 A, p. 117, pl. xxxii, fig. 18. (Re-named Comptonia microphylla by Berry, 1906 A.) Atane Beds: Greenland — Powelliana, Lesquereux, 1892, p. 155, pl. lvi, figs. 4, 5. Dakota Group; Kansas, U.S.A. - pseudo-Meriani, Lesquereux, 1878 B. p. 293, pl. lviii, fig. 11. Laramie Formation; Wyoming, U.S.A. --- **Uddeni**, Lesquereux, 1892, p. 154, pl. lvii, fig. 2. Dakota Group; Kansas, U.S.A. - ? Westii, Knowlton in Lesquereux, 1892, p. 154, pl. xxxviii, figs. 9, 10. Ibid. Rhynchogoniopsis neocomiensis, Neumann, 1907, p. 87, pl. i, fig. 3. Neocomian; Peru. Rhytisma hederæ, Heer, 1882, p. 20, pl. xxiv, fig. 6 a. Atane Beds; Greenland. Rhytismites hederæ, Meschinelli, 1892, p. 781. (=Rhytisma hederæ, Heer, 1882.) Roemeria americana, Unger in Roemer, 1852, p. 95. Cretaceous (?); Texas, U.S.A. Rogersia angustifolia, Fontaine, 1889, p. 288, pl. cxliii, fg. 2; pl. cxliv, figs. 4, 8; pl. cl, figs. 2-7. Potomac Formation; Virginia, U.S.A. - angustifolia, var. parva, Fontaine in Ward, 1905, p. 523, pl. cxi, Older Potomac Formation; Washington, U.S.A. fig. 9. --- longifolia, Fontaine, 1889, p. 287, pl. exxix, fig. 6; pl. exliv, fig. 2; pl. cl, fig. 1; pl. clix, figs. 1, 2. Potomac Formation; Virginia, U.S.A. Rohlfsia celastroides, Schenk, 1883, p. 9, pl. iv, fig. 12. Upper Cretaceous; Libyan Desert. Rosellinites lapideus (Lesquereux), Knowlton, 1898, p. 204 (re-naming Sphæria lapidea, Lesquereux, 1873). Laramie Formation; Colorado, U.S.A.

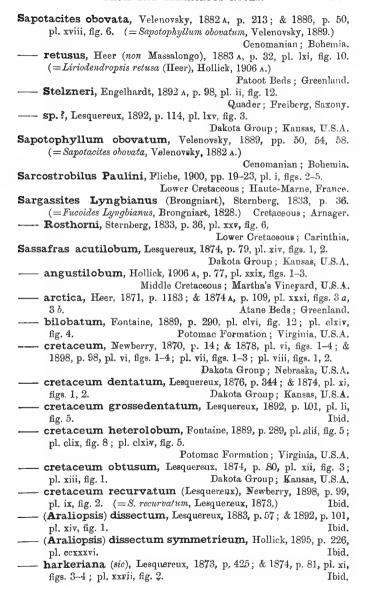
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Rosthornia carinthiaca, Unger, 1842, p. 110.
                                                  Senonian; Carinthia.
Royena desertorum, Heer, 1876 B, p. 10, figs. 11-16 (fruits).
                                             Upper Cretaceous; Egypt.
Rubiæphyllum (Ericophyllum) Gaylussaciæ, Bayer, 1893,
      pp. 31, 47, text-fig. 21; & Bayer in Fritsch, 1893, p. 131, text-fig. 192.
                                           Senonian; Priesen, Bohemia.
Sabal Campbelli, Newberry, 1863, p. 515; & 1898, p. 27, pl. xxi,
       figs. 1, 2.
                            Tertiary & Cretaceous; Washington, U.S.A.
   grandifolia, Newberry, 1898, p. 28, pl. xxv; pl. lxiii, fig. 5; pl. lxiv,
                                  Laramie Formation; Colorado, U.S.A.
       fig. 2, 2 a.
- imperialis, Dawson, 1883, p. 26, pl. vi, fig. 23.
                           Upper Cretaceous; Vancouver Island, Canada.
 ---- rigida, Hatcher, 1901, p. 263, text-fig. 1.
                                  Laramie Formation; Wyoming, U.S.A.
 Sabalites andegavensis, bitherto described as Tertiary, said to be
       Senonian by Welsch, 1897, p. 667.
 Sabiocaulis Sakuraii, Stopes & Fujii, 1910, pp. 66-70, pl. viii, fig.
                                   Upper Cretaceous; Hokkaido, Japan.
       pl. ix, figs. 55-57.
 Sagenopteris elliptica, Fontaine, 1889, p. 149, pl. xxvii, figs. 9, 11-17.
                                   Potomac Formation; Virginia, U.S.A.
 - latifolia, Fontaine, 1889, p. 148, pl. xxvii, fig. 10.
 — Mantelli (Dunker), Schenk, 1871 B, p. 222, pl. xxxi, fig. 5. Recorded
                      Diller & Stanton, 1894, American Lower Cretaceous.
  neocomiensis, Hosius & von der Marck, 1880, p. 210, pl. xliv,
                                                Neocomian; Westphalia.
        fig. 194.
  --- nervosa, Fontaine in Ward, 1905, p. 237, pl. lxv, figs. 41-45.
                                    Shasta Formation; California, U.S.A.
 nilssoniana (Brongniart), Ward, recorded Penhallow, 1902 B, p. 39.
                      Upper Cretaceous; Queen Charlotte Island, Canada.
 — oblongifolia, Penhallow, 1902 в, р. 40, text-fig. 2.
                      Lower Cretaceous; Queen Charlotte Island, Canada.
  oregonensis, Fontaine in Ward, 1905, p. 235, pl. lxv, figs. 36-38
        (re-naming Sagenopteris latifolia, Fontaine in Diller & Stanton,
        & Angiopteridium oregonense, Fontaine in Stanton.)
                                    Shasta Formation; California, U.S.A.
                                               (= Thinnfeldia variabilis,
    — variabilis, Velenovsky, 1889, p. 40.
        Velenovsky, 1885.)
                                                 Perucer Beds; Bohemia.
   virginiensis, Fontaine, 1889, p. 150, pl. cxxxvlii, fig. 13; pl. cxxxix,
                                    Potomac Formation; Virginia, U.S.A.
  ____ ? sp., Fontaine in Diller & Stanton, 1894, p. 450; & in Ward,
        1905, p. 238, pl. lxv, fig. 40. Shasta Formation; California, U.S.A.
  Sagittaria Victor-Masoni, Ward, 1895 A, p. 354, pl. iii, fig. 5.
                                    Potomac Formation; Virginia, U.S.A.
  Salicinium varians, Hofmann, 1884, p. 191.
                                                     Danian ; Maestricht.
  Salicinoxylon biradiatum, Lignier, 1907, p. 272, pl. xviii, figs. 18-24;
         pl. xxiii, figs. 84, 92.
                                              Cenomanian; Hève, France.
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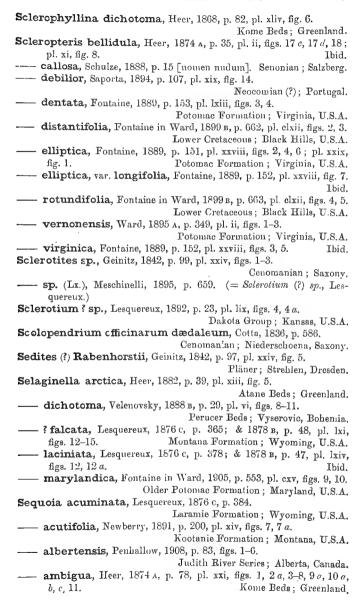


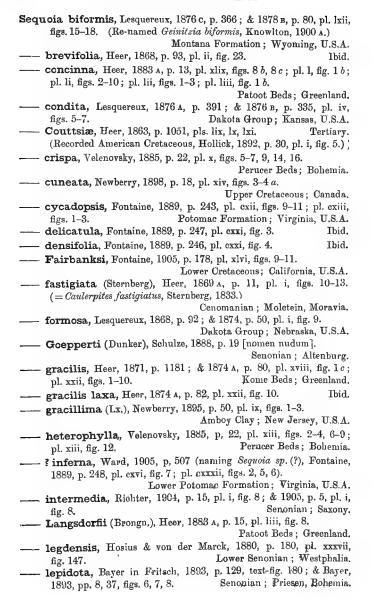


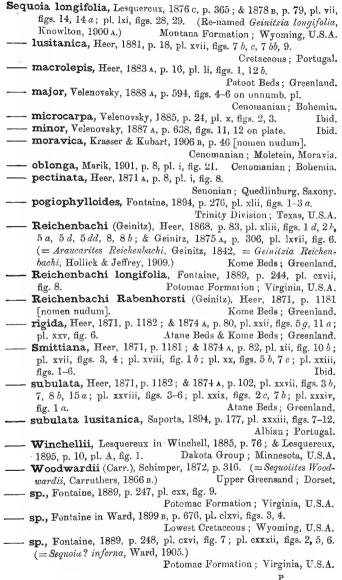
Sapindophyllum coriaceum, Ettingshausen, 1887 a, p. 187, pl. ix,
figs. 22-23. Upper Cretaceous; New Zealand.
— pelagicum, Unger in Velenovsky, 1886, p. 7.
Cenomanian; Bohemia.
— subapiculatum, Saporta, 1894, p. 205, pl. xxxvi, figs. 10-11;
pl. xxxvii, figs. 4-5, 10 a, 17. Upper Albian; Portugal.
Sapindopsis brevifolia, Fontaine, 1889, p. 300, pl. clvii, fig. 4;
pl. clv, fige. 1, 7; pl. clxiti, fig. 3.
Potomac Formation; Virginia, U.S.A.
cordata, Fontaine, 1889, p. 296, pl. cxlvii, fig. 1. Ibid.
— elliptica, Fontaine, 1889, p. 297, pl. exlvii, fig. 3. Ibid.
— magnifolia, Fontaine, 1889, p. 297, pl. cli, figs. 2, 3; pl. clii, figs.
2, 3; pl. cliii, fig. 2; pl. cliv, figs. 1, 5; pl. clv, fig. 6. Ibid.
obtusifolia, Fontaine, 1889, p. 301, pl. elvi, fig. 13; pl. elix, figs.
3-6. Ibid.
— oregonensis, Fontaine, 1905 A, p. 268, pl. lxix, figs. 15-17. (Re-
named by Berry, 1910 D, Nilssonia oregonensis.)
Shasta Formation; Oregon, U.S.A.
parvifolia, Fontaine, 1889, p. 300, pl. cliv, fig. 6.
Potomac Formation; Virginia, U.S.A.
— tenuinervis, Fontaine, 1889, p. 301, pl. cliii, fig. 1. Ibid.
— variabilis, Fontaine, 1889, p. 298, pl. cli, fig. 1; pl. clii, figs. 1, 4;
pl. cliii, fig. 3; pl. cliv, figs. 2-4; pl. clv, figs. 2-5. Ibid.
Sapindus apiculatus, Velenovsky, 1886, p. 53, pl. xxii, figs. 1-8.
$(=Sapindophyllum\ apiculatum,\ Velenovsky,\ 1889.)$
Cenomanian; Bohemia.
diversifolius, Lesquereux, 1892, p. 158, pl. lxiv, fig. 18.
Dakota Group; Kansas, U.S.A.
— imperfectus, Hollick, 1905 c, p. 415, pl. lxxviii, fig. 4.
Cretaceous; Long Island, U.S.A.
— inexpectans, Knowlton in Stanton & Hatcher, 1905, p. 144,
pl. xvii, fig. 7. Judith River Beds; Montana, U.S.A.
—— Morrisoni, Lesquereux MS. in Heer, 1882, p. 95, pl. xl, fig. 1;
pl. xli, figs. 1 a, 1 b; pl. xliii, figs. 1a, 1 b; pl. xliv, figs. 7-8; & in
Lesquereux, 1883, p. 83, pl. xvi, figs. 1, 2.
Dakota Group: Colorado, U.S.A.
— prodromus, Heer, 1871, p. 1184; & 1874 A, p. 117, pl. xxxiv, fig. 5.
Atane Beds; Greenland.
— saxonicus, Engelhardt, 1892 a, p. 101, pl. ii, fig. 14.
Quader; Freiberg, Saxony.
Sapotacites Haydenii, Heer in Meek & Hayden, 1859, p. 265.
Dakota Group; Nebraska, U.S.A.
— hyperboreus, Heer, 1883 A, p. 32, pl. lxi, figs. 7-9.
Patoot Beds; Greenland.
- Knowltoni, Berry, 1906 B, p. 181, pl. viii, fig. 1. (= Sapotacites
sp. (?), Lesquereux, 1892.) Magothy Formation; Delaware, U.S.A.
nervillosus, Heer, 1883 A, p. 32, pl. lxi, fig. 11.
Patoot Beds; Greenland.



pl. xxviii, figs. 1, 2; pl. xl, fig. 4. Amboy Clay; Woodbridge, U.S.A. - Krejcii, Velenovsky, 1882 A, p. 213 [nomen nudum]. Cretaceous; Bohemia. — Leconteanum, Lesquereux, 1869, p. 431, pl. xxiii, fig. 1. (=Persea Leconteana, Lesquereux, 1874.) Dakota Group; Nebraska, U.S.A. — (**Araliopsis**) **mirabilis**, Lesquereux, 1873, p. 424; & 1874, p. 80, pl. xii, fig. 1. Dakota Group; Kansas, U.S.A. --- Mudgii, Lesquereux, 1868, p. 99; & 1874, p. 78, pl. xiv, figs. 3, 4; Dakota Group; Nebraska, U.S.A. pl. xxx, fig. 7. -- obtusum, Lesquereux, 1872, p. 303; & 1874, p. 81, pl. xiii, figs. 2-4. — (Araliopsis) papillosum, Lesquereux, 1892, p. 102, pl. vi, fig. 7, Dakota Group; Kansas, U.S.A. — parvifolium, Fontaine, 1889, p. 289, pl. cxxxix, fig. 7. Potomac Formation; Maryland, U.S.A. — **Paulini**, Fliche, 1900, p. 15, pl. i, figs. 2-5. Neocomian; France. --- Pfaffiana, Heer, 1883 A, p. 29, pl. lv, fig. 18. Patoot Beds; Greenland. --- (Araliopsis) platanoides, Lesquereux, 1883, p. 58, pl. vii, fig. 1. Dakota Group; Kansas, U.S.A. - ? primordiale, Lesquereux, 1892, p. 100, pl. xvi, fig. 10. - progenitor, Newberry MS. (?) in Hollick, 1894 A, p. 53, pl. clxxiv, fig. 1; & Newberry, 1895, p. 88, pl. xxvii, figs. 1-3. Cretaceous; Long Island, U.S.A. — protophyllum, Saporta, 1894, p. 182, pl. xxxi, fig. 17. Albian; Portugal. — (Araliopsis) recurvatum, Lesquereux, 1873, p. 424. (=Platanus recurvata, Lesquereux, 1874, and S. cretaceum recurvatum (Lesquereux), Newberry, 1898.) Dakota Group; Kansas, U.S.A. - (Araliopsis) rotundilobum, Newberry in Ward, 1895 A, p. 380. Potomac Formation; Virginia, U.S.A. --- subintegrifolium, Lesquereux, 1868, p. 99; & 1874, p. 82, pl. iii, Dakota Group; Nebraska, U.S.A. fig. 5. — sp., Dawson, 1883, p. 27, pl. vii, figs. 30, 30 a. Upper Cretaceous; Vancouver Island, Canada. Saururopsis niponensis, Stopes & Fujii, 1910, pp. 58-62, pl. vii, figs. 42-47; text-fig. 19. Upper Cretaceous; Hokkaido, Japan. Schizæopteris mesozoica, Stopes & Fujii, 1910, pp. 6-10, text-figs. 1-3, pl. ii, phot. 1. Schizoneuropsis posthuma, Richter, 1906, p. 13, pl. vi, fig. 10. Senonian; Quedlinburg, Saxony. Sclerophyllina cretosa (Schenk), Heer, 1874 A, p. 59, pl. xiii, figs. 13, 14; pl. xvii, fig. 12; & p. 124, pl. xxxv, figs. 8-10. (=Baiera cretosa, Schenk, 1871 A.) Kome Beds; Greenland. — cretosa major, Неег, 1874 л, р. 124, pl. xxxv, figs. 9–10. Cretaceous; Spitzbergen,



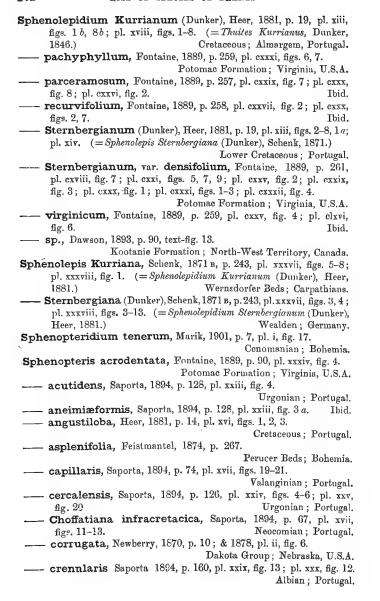


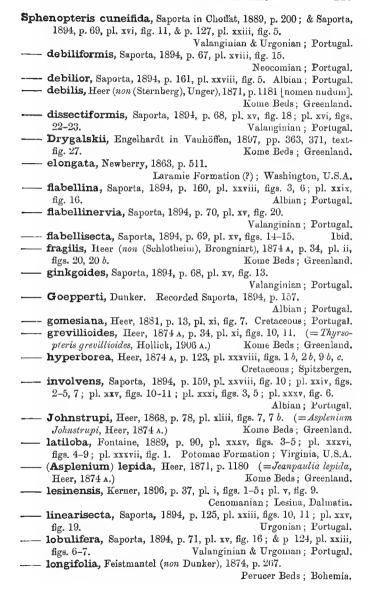


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Sequoia sp., Hollick, 1905 c, p. 410, pl. lxxii, fig. 2.
                               Middle Cretaceous; Long Island, U.S.A.
--- sp., Hollick, 1906 A, p. 44, pl. ii, fig. 42 (cone).
                         Middle Cretaceous; Martha's Vineyard, U.S.A.
- sp.?, Knowlton in Stanton & Hatcher, 1905, p. 131, pl. xiv, fig. 2
      (cone).
                                   Judith River Beds; Alberta, Canada.
— sp. ?, Newberry, 1895, p. 49, pl. ix, figs. 4, 4 a.
                                      Amboy Clay; New Jersey, U.S.A.
Sequoiites Gardneri, Carruthers, 1869, p. 7, pl. i, figs. 7, 8.
                                                    Gault: Folkestone.
--- Holsti, Nathorst in Conwentz, 1892, p. 28, pl. iii, figs. 4-5: pl. iv,
       figs. 1-4; pl. viii, figs. 2-7.
                                                    Senonian; Sweden.
--- ovalis, Carruthers, 1871, p. 541, text-fig.
                                                    Gault; Folkestone.
--- polyanthes, Marik, 1901, p. 9, pl. ii, fig. 1.
                                                Cenomanian; Bohemia.
--- Woodwardii, Carruthers, 1866 B, p. 544, pl. xxi, figs. 11-16.
                                         Upper Greensand; Blackdown.
Sequoiopsis speciosa, Richter, 1899 B, p. 44.
                                        Senonian: Quedlinburg, Saxony.
Serenopsis Kempii, Hollick, 1893 B, p. 169, pl. cxlix. (= Nelumbo
       Kempii, Hollick, 1905 c.)
                                    Formation (?); Long Island, U.S.A.
Sillimania texana, Unger, 1850 A, p. 524: & in Roemer, 1852, p. 95.
                                           Cretaceous (?); Texas, U.S.A.
 Simaba? saxonica, Engelhardt, 1892 A, p. 102, pl. ii, fig. 6.
                                              Quader: Freiberg, Saxony.
 Smilax grandifolia-cretacea, Lesquereux, 1892, p. 40, pl. xlvi, fig. 3.
                                          Dakota Group; Kansas, U.S.A.
 --- panartia, Bayer, 1896, pp. 8, 32, fig. 5.
                              Upper Senonian; Kieslingswalda, Bohemia.
 --- raritanensis, Berry, 1909, p. 248.
                                             Raritan Formation; U.S.A.
 --- undulata, Lesquereux, 1892, p. 39, pl. xlvi, fig. 2.
                                          Dakota Group; Kansas, U.S.A.
 Solenostelopteris japonica, Kershaw, 1910, p. 689, pl. lviii & text-
                                     Upper Cretaceous; Hokkaido, Japan.
 Sparganium cretaceum, Heer, 1874 A, p. 105, pl. xxviii, fig. 12.
                                                 Atane Beds; Greenland.
 Spathites sp., Knowlton, 1897, p. 140.
                                  Montana Formation; Wyoming, U.S.A.
 Sphæria cretacea, Heer, 1883 A, p. 1, pl. lx, fig. 2. (=Sphærites
        cretaceus, Meschinelli, 1892.)
                                                Patoot Beds: Greenland.
  --- lapidea, Lesquereux, 1873, p. 373. (=Sphærites lapideus, Meschi-
        nelli, 1892, & Rosellinites lapideus, Knowlton, 1898.)
                                 Laramie Formation; New Mexico, U.S.A.
  --- myricæ, Lesquereux, 1873, p. 390. (= Sphærites myricæ, Meschi-
        nelli, 1892.)
                                   Laramie Formation; Wyoming, U.S.A.
  --- phyllostichoides, Saporta, 1894, p. 156, pl. xxviii, fig. 1.
                                                       Albian; Portugal.
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Sphæria problematica, Knowlton in Lesquereux, 1892, p. 23, pl. xxxi, figs. 2, 2 a. (= Sphærites problematicus, Meschinelli, 1895.) Dakota Group; Kansas, U.S.A. - rhytismoides, Lesquereux, 1876 A, p. 382. Laramie Formation: Wyoming, U.S.A. Sphærites cretaceus (Heer), Meschinelli, 1892, p. 753. (=Sphæria cretacea, Heer, 1883 A.) Patoot Beds: Greenland. -- lapideus (Lesquereux), Meschinelli, 1892, p. 766. (= Sphæria lapidea, Lesquereux, 1873.) -- myricæ (Lesquereux), Meschinelli, 1892, p. 759. (=Sphæria myrica, Lesquereux, 1873.) Laramie Formation; Wyoming, U.S.A. - primævus, Goeppert, 1836, p. 87 [nomen nudum]. — problematicus, Meschinelli, 1895, p. 657. (=Sphæria problematica, Knowlton, 1892.) Dakota Group; Kansas, U.S.A. Senonian; Aix, Rhenish Prussia. Sphærococcites centralis, Goeppert, 1851, p. 46; & 1854, p. 229, Quader; Westphalia. --- cornutus, Debey, 1849, p. 299 [nomen nudum]. Senonian; Aix, Rhenish Prussia. - Laubei. Engelhardt, 1892, p. 91, pl. i, fig. 1. Perucer Beds; Bohemia. — lesinensis, Unger, 1869, p. 56, pl. v, fig. 1. Cretaceous : Dalmatia. --- lichenoides, Goeppert, 1865, p. 642 [nomen nudum]. Quader; Germany. --- Mantelli, Roemer, 1841, p. 1, pl. i, fig. 2. (=Rhodomenites Mantelli, Debey, = Chondrites Mantelli, Geinitz, 1850 A.) Pläner: Saxony. — Meyrati, Fischer-Ooster, 1858, p. 56, pl. iv, fig. 4. Neocomian; Switzerland. --- Mohli, Debey, 1849, p. 299 [nomen nudum]. Senonian; Aix, Rhenish Prussia. — pinnatifidus, Unger, 1850 A, p. 27; & 1853, p. 80, pl. xxiv, fig. 7. Cretaceous; Bavaria. - strictus. Agardh MS. in Brongniart, 1828, p. 52. (=Rhodomelites Cretaceous; La Rochelle, France. strictus, Sternberg.) striolatus. Presl in Sternberg, 1825, p. 105, pl. xxvii, fig. 3; pl. lxv, figs. 32, 33. Tertiary. (Recorded Otto, 1852?, p. 14, pl. iv. fig. 1.) Lower Quader; Dippoldiswalde Sphenaspis statenensis, Hollick & Jeffrey, 1909, p. 51, pl. x, figs. 22. 23; pl. xxvi, figs. 2-4. Raritan Formation; Staten Island, U.S.A. Sphenolepidium debile, Heer, 1881, p. 20, pl. iii, figs. 20, 21, 20 b. Cretaceous; Portugal. - dentifolium, Fontaine, 1889, p. 258, pl. exxvii, figs. 3, 4; pl. exxviii, figs. 2-6; pl. exxix, fig. 5; pl. exxx, figs. 4-6, 10

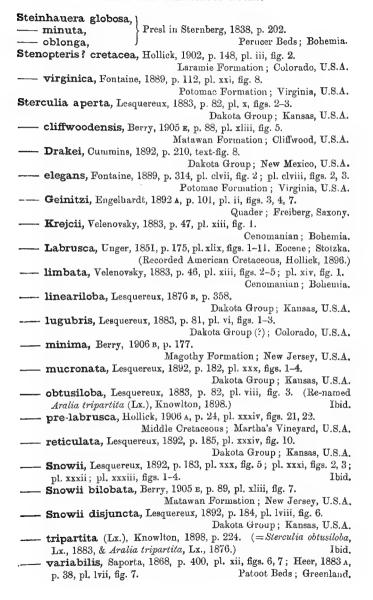
Potomac Formation; Virginia, U.S.A.



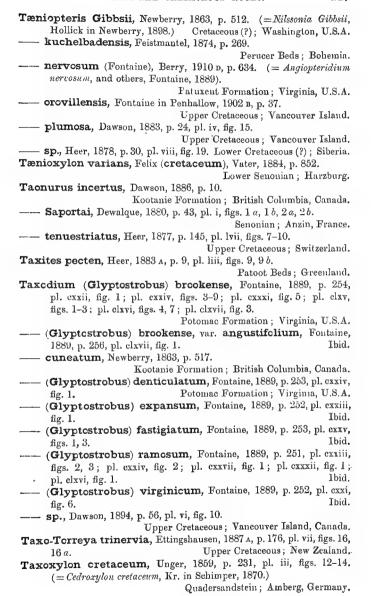


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Sphenopteris lupulina, Heer, 1881, p. 15, pl. xi, figs. 8, 8b-c.
                                                  Cretaceous; Portugal.
 — Mantelli, Brongniart, 1828, p. 170, pl. xlv, figs. 3-7. (= Onychiopsis
      Mantelli (Brongniart), Seward, 1894, = Hymenopteris psilotoides,
       Stokes & Webb, 1824.)
                                                Hastings Sands; Sussex.
 — Morrisiana, Johnston, 1896, p. 58, figs. 14, 15.
                                               Cretaceous (?); Tasmania.
--- Nordenskiöldi, Heer, 1871, p. 1181 [nomen nudum].
                                                Kome Beds; Greenland.
--- pachyphylla, Fontaine, 1889, p. 93, pl. l, fig. 5.
                                   Potomac Formation; Virginia, U.S.A.
--- Pichleri, Schenk, 1876, p. 166, pl. xxix, figs. 2-5.
                                              Upper Cretaceous; Tyrol.
 — plurinerva, Heer, 1881, p. 13, pl. xi, figs. 6 & 6 b; pl. xv, figs. 8,
                                          Aptian-Neocomian ; Portugal.
 — polyclada, Saporta, 1894, p. 127, pl. xxiii, fig. 12.
                                                   Urgonian; Portugal.
--- pseudo-Cordai, Saporta, 1894, p. 163, pl. xxviii, fig. 11; pl. xxx,
       figs. 3-8; pl. xxxiii, fig. 4 a.
                                                     Albian ; Portugal.
 - pseudolepida, Saporta, 1894, p. 73, pl. xv, fig. 32.
                                                 Valanginian; Portugal.
--- pygmæa, Saporta, 1894, p. 127, pl. xxiv, fig. 7 a.
                                                   Urgonian: Portugal.
  recurrens, Saporta, 1894, p. 162, pl. xxix, fig. 15.
                                                      Albian : Portugal.
- spatulata, Fontaine, 1889, p. 93, pl. 1, fig. 4.
                                   Potomac Formation; Virginia, U.S.A.
                                                Perucer Beds; Bohemia.
 --- subadnata, Feistmantel, 1874, p. 267.
 --- subtilinervis, Saporta, 1894, p. 19, pl. iii, fig. 32; pl. xiv, figs. 12,
                                               Valanginian; Portugal.
       17; p. 68, pl. xv, fig. 22; pl. xvi, fig. 4.
 — tasmanica, Johnston, 1896, p. 60, figs. 10-13.
                                               Cretaceous (?); Tasmania.
 ---- tenuicula, Yokoyama, 1894, p. 217, pl. xx, fig. 11; pl. xxi, figs. 2,
                                                     Neocomian; Japan.
       2 a; pl. xxviii, fig. 6.
 tenuifissa, Saporta, 1894, p. 161, pl. xxviii, fig. 4.
                                                       Albian; Portugal.
-- thrysopteroides, Fontaine, 1889, p. 89, pl. xxv, fig. 3; pl. lviii,
                                   Potomac Formation; Virginia, U.S.A.
       fig. 5.
    - valdensis, Heer, 1881, p. 14, pl. xv, figs. 9-14; pl. xvi, fig. 5 b.
                                            Lower Cretaceous; Portugal.
Sphenozamites sp., Dawson, 1886, p. 7.
                            Kootanie Formation; Martin Creek, Canada.
Spiropteris sp., Nathorst, 1891, p. 34, pl. i, figs. 15-17.
                            Upper Cretaceous (?); Königs-Wusterhausen.
Spongia Saxonica, Geinitz, 1850 A, p. 264. (= Spongites Saxonicus,
       Geinitz, 1842.)
Spongites Saxonicus, Geinitz, 1842, p. 96, pl. xxiii, figs. 1, 2.
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Quadersandstein; Saxony.



Sterculia vetustula, Dawson, 1886, p. 10, pl. iii, fig. 2.
Middle Cretaceous; Canada.
sp.?, Hollick, 1898 p, p. 133, pl. xiv, figs. 4-7.
Upper Cretaceous; New Jersey, U.S.A.
sp.?, Hollick, 1898 B, p. 422, pl. xxxvii, fig. 5.
Middle Cretaceous; Staten Island, U.S.A.
sp.?, Hollick, 1906 A, p. 95, pl. xxxiv, figs. 18, 19.
Middle Cretaceous; Martha's Vineyard, U.S.A.
Stichus mermigaides Etherides 1004 v 855 -1-
Stichus mermisoides, Etheridge, 1904, p. 255, pls. xxx, xxxi.
Cretaceous; Australia.
Stigmaria flexuosa, Debey, 1848 A, p. 117 [nomen nudum],
Senonian; Aix, Rhenish Prussia.
Strezeleckia gangamopteroides, Johnston, 1896, p. 58, figs. 5-7.
Cretaceous (?); Tasmania.
tenuifolia, Johnston, 1896, p. 58, fig. 8. Ibid.
Strobilites Bucklandi, Lindley & Hutton, 1835, pl. exxix; Gardner,
1886 A, p. 200. Upper Greensand (?); Wiltshire.
— Davisii, Hollick & Jeffrey, 1909, p. 68, pl. iii, fig. 10.
Raritan Formation; Staten Island, U.S.A.
inquirendus, Hollick, 1898 A, p. 130, pl. xi, fig. 1.
Upper Cretaceous; New Jersey, U.S.A.
microsporophorus, Hollick & Jeffrey, 1909, p. 66, pl. x, figs. 18-21;
pl. xxiv, figs. 2-6. Raritan Formation; Staten Island, U.S.A,
perplexus, Hollick, 1906 A, p. 107, pl. ii, fig. 43.
Middle Cretaceous; Martha's Vineyard, U.S.A.
Raritan Formation; Staten Island, U.S.A.
Sycophyllum dentatum, Schulze, 1888, p. 464.
Perucer Beds; Bohemia.
Symphorocarpophyllum Albertum, Dawson, 1887, p. 30, pl. ii,
fig. 17. Upper Laramie Formation; Canada.
Linnæiforme, Dawson, 1887, p. 30, pl. ii, fig. 18. Ibid.
Syringodendron? sp., Otto, 1854, p. 26, pl. iv, figs. 3, 4.
Lower Quader; Dippoldiswalde, Saxony.
Tænidium alysioides, Hosius & von der Marck, 1880, p. 131, pl. xxiv,
fig. 5. Upper Senonian; Westphalia.
— lusitanicum, Heer, 1881, p. 12, pl. xx. (= Volubilites lusitanicus,
Lorenz, 1901.) Cretaceous; Portugal
— pinnatisectum, Saporta, 1880, p. 642, pl. i, fig. 2.
Upper Neocomian; Havre, France.
Tæniopteris arctica (spelt Tanæopteris), Heer, 1871, p. 1181 [nomen
nudum]. Kome Beds; Greenland.
- auriculatum (Fontaine), Berry, 1910 p, p. 634. (= Angio-
pteridium auriculatum, Fontaine, 1889.)
Patuxent Formation; Virginia, U.S.A.
deperdita, Heer, 1883 A, p. 8, pl. xlviii, fig. 14.
Patoot Beds; Greenland.

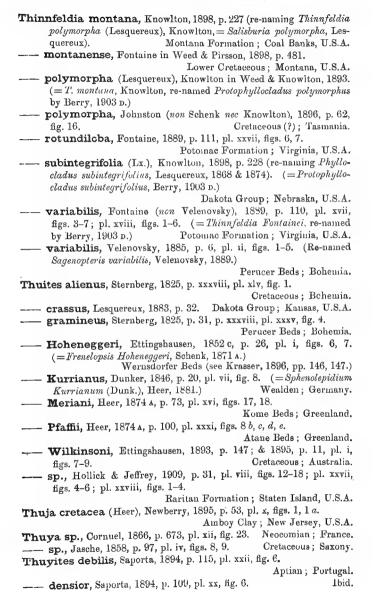


Taxoxylon halternianum, Hosius & von der Marck, 1880, p. 194, pl. xli, figs. 166-168. Lower Senonian; Westphalia. Tempskya cretacea, Hosius & von der Marck, 1880, p. 192, pl. xxxix, figs. 161-163. Ibid. varians (Corda), Velenovsky, 1888 B, p. 23, pl. vi, figs. 1-7; pl. v. fig. 5, & text-fig. Perucer Beds; Bohemia. Terminalia rectinervis, Velenovsky, 1886, p. 52, pl. xx, figs. 1, 2. (= Terminaliphyllum rectinerce, Velenovsky, 1889.) Cenomanian; Kaunic, Bohemia. Terminaliphyllum rectinerve, Velenovsky, 1889. (= Terminalia rectinervis, Velenovsky, 1886.) Ternstræmia crassipes, Velenovsky, 1886, p. 54, pl. xviii, figs. 3, 4. (= Ternstræmiphyllum crassipes, Velenovsky, 1889.) Cenomanian; Vyserovic, Bohemia. Ternstræmiphyllum crassipes, Velenovsky, 1889. (= Ternstræmia crassipes, Velenovsky, 1886.) Tetraphyllum dubium, Hosius & von der Marck, 1880, p. 137, pl. xxv, fig. 14. Upper Senonian; Westphalia. - oblongum, Heer, 1882, p. 105, pl. xxvi, figs. 5 b, 6. Atane Beds; Greenland. Thalassocharis Binkhorsti, Debey, 1865, p. 57. Cretaceous; Prussia. -- Bosqueti, Debey, 1851, p. 568; & in Hosius & von der Marck, 1880, Senonian; Aix, Rhenish Prussia. p. 146. - Bosqueti, forma brevi-articulata, Miquel, 1853, p. 51, pl. vi, Cretaceous; Belgium. fig. 2. - Bosqueti, forma lata, Miquel, 1853, p. £1, pl. vi, fig. 3. Upper Senonian; Belgium. —— Muelleri, Debey, 1848 A, p. 119; & 1851, p. 568. Senonian; Aix, Rhenish Prussia. westfalica, Hosius & von der Marck, 1880, p. 147, pl. xxvi, figs. 25-28, 30-34; pl. xxvii, figs. 29, 35-39; pl. xxviii, figs. 40-42. Upper Senonian; Westphalia. Thinnfeldia arctica, Heer, 1874 A, p. 123, pl. xxxv, figs. 11-16; Cretaceous; Spitzbergen. pl. xxxvi, fig. 10 b. Buftoni, Johnston, 1896, p. 61, fig. 18. Cretaceous (?); Tasmania. --- Fontainei, Berry, 1903 p, p. 443 (re-naming Thinnfeldia variabilis, Potomac Formation; Virginia, U.S.A. Fontaine, 1889). --- granulata, Fontaine, 1889, p. 111, pl. xxvi, figs. 10-12; pl. xxvii, figs. 1-5, 8; pl. clxix, fig. 1. - lanceolata, Knowlton in Weed & Knowlton, 1893, p. 49, pl. v, fig. 5. (Re-named Protophyllocladus lanceolatus, Berry, 1903 D.) Laramie Formation; Montana, U.S.A. Lesquereuxiana, Heer, 1882, p. 37, pl. xliv, figs. 9-10; pl. xlvi,

marylandica, Fontaine in Ward, 1905, p. 541, pl. cxiv, figs. 8, 9.

Atane Beds; Greenland.

Older Potomac Formation; Maryland, U.S.A.



Thuyites pulchelliformis, Saporta, 1894, p. 109, pl. xix, figs. 21-24;
pl. xx, figs. 7-10; p. 115, pl. xxi, fig. 7. Aptian; Portugal.
—— sp., Nathorst, 1891, p. 27, pl. i, figs. 8, 9, 10.
Upper Cretaceous (?); Rostock.
Thuyoxylon americanum, Unger in Roemer, 1852, p. 95.
Cretaceous (?); Texas, U.S.A.
Thyrsopteris alata, Fontaine, 1889, p. 124, pl. xxxvi, fig. 5.
Potomac Formation; Virginia, U.S.A.
— angustifolia, Fontaine, 1889, p. 131, pl. xliv, fig. 4; pl. xlv, fig. 3;
pl. xlviii, fig. 2; pl. xlix, figs. 3, 4; pl. lv, fig. 2; pl. lviii, fig. 8.
Ibid,
— angustiloba, Fontaine, 1889, p. 134, pl. xlviii, figs. 3-5; pl. lv,
fig. 3. Ibid:
- bella, Fontaine, 1889, p. 139, pl. liii, fig. 5; pl. lv, figs. 6, 7; pl. lvi,
figs. 2, 5; pl. lvii, figs. 1, 5; pl. lviii, fig. 4. Ibid.
brevipennis, Fontaine, 1889, p. 124, pl. xxxiv, fig. 3; pl. xxxvi,
capsulifera, Velenovsky, 1888 B, p. 10, pl. i, figs. 6-12. (= Ony-chiopsis capsulifera, Nathorst, 1890.) Perucer Beds; Bohemia.
—— crassinervis, Fontaine, 1889, p. 130, pl. xli, figs. 1-3.
Potomac Formation; Virginia, U.S.A.
— crenata, Fontaine, 1889, p. 127, pl. xxxix, figs. 1, 2. Ibid.
decurrens, Fontaine, 1889, p. 130, pl. xliii, fig. 7; pl. xlvi, figs. 2,
4; pl. xlix, figs. 5-7. Ibid.
— densifolia, Fontaine, 1889, p. 129, pl. xxxix, fig. 3; pl. xl, figs. 2-5;
pl. li, fig. 5. Ibid.
dentata, Fontaine, 1889, p. 121, pl. xxiv, figs. 4, 6, 7, 9; pl. xxv,
figs. 1, 2. Ibid.
dentifolia, Fontaine in Ward, 1899 B, p. 660, pl. clxi, figs. 6-9.
Lower Cretaceous; Black Hills, U.S.A.
—— distans, Fontaine, 1889, p. 134, pl. xlvii, fig. 3; pl. liv, fig. 8.
Potomac Formation; Virginia, U.S.A.
divaricata, Fontaine, 1889, p. 125, pl. xxxvii, figs. 5-8; pl. clxx,
fig. 1. Ibid.
elliptica, Fontaine, 1889, p. 133, pl. xxiv, fig. 3; pl. xlvi, fig. 1;
pl. l, figs. 6, 9; pl. li, figs. 4, 6, 7; pl. liv, fig. 6; pl. lv, fig. 4;
pl. lvi, figs. 6, 7; pl. lvii, fig. 6; pl. lviii, fig. 2. Ibid.
grevillioides (Heer), Hollick, 1906 A, p. 31, pl. i, figs. 10-13.
(= Sphenopteris grevillioides, Heer, 1874 A.)
Middle Cretaceous; Martha's Vineyard, U.S.A.
— heteroloba, Fontaine, 1889, p. 139, pl. liii, fig. 4.
Potomac Formation; Virginia, U.S.A.
- heteromorpha, Fontaine, 1889, p. 136, pl. lii, fig. 1. Ibid.
— heterophylla, Fontaine, 1889, p. 142, pl. lviii, fig. 3. Ibid.
— inæquipihnata, Fontaine, 1889, p. 142, pl. lvii, figs. 3, 8. Ibid.
- insignis, Fontaine, 1889, p. 127, pl. xxxix, fig. 4; pl. xl, fig. 1;
pl. xli, fig. 6; pl. xlii, figs. 1, 2, 4; pl. xliii, figs. 1, 3. Ibid.

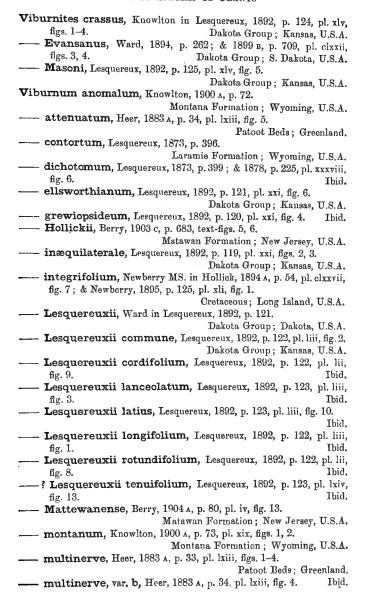
Thyrsopteris insignis angustipennis, Fontaine, 1889, p. 128, pl. 2	dii,
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— Meekiana, Fontaine, 1889, p. 125, pl. xxxviii, figs. 2-4, 8; p	l. I,
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— Meekiana angustiloba, Fontaine, 1889, p. 126, pl. xxx	viii,
figs. 5-7, 9; pl. xliii, fig. 8; pl. xliv, fig. 3; pl. xlvii, fig. 4; pl. xlv	riii,
	oid.
— microloba, Fontaine, 1889, p. 140, pl. lvii, fig. 4.	
Potomac Formation; Virginia, U.S.	A.
- microloba alata, Fontaine, 1889, p. 140, pl. lv, fig. 5; pl. lv	riii,
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— microphylla, Fontaine, 1889, p. 131, pl. xlv, figs. 1, 2, 4, 5.	
	bid.
nana, Fontaine, 1889, p. 141, pl. lvi, figs. 4, 8.	bid.
nervosa, Fontaine, 1889, p. 122, pl. xxv, figs. 4, 5, 16; pl. xxx	vii,
figs. 2, 4; pl. xxxix, fig. 5; pl. xl, fig. 6.	bid.
obtusiloba, Fontaine, 1889, p. 143, pl. lviii, figs. 7, 10.	bid.
— pachyphylla, Fontaine, 1889, p. 135, pl. 1, fig. 3.	bid.
pachyrachis, Fontaine, 1889, p. 132, pl. xlvi, figs. 3, 5; pl. xlvi	vii,
figs. 1, 2; pl. xlix, fig. 1.	bid.
pecopteroides, Fontaine, 1889, p. 135, pl. li, fig. 1.	bid.
— pinnatifida, Fontaine, 1889, p. 136, pl. li, fig. 2; pl. liv, figs. 4	, 5,
7; pl. lvii, fig. 7.	bid.
- rarinervis, Fontaine, 1889, p. 123, pl. xxvi, figs. 6, 7; pl. x	liii,
figs. 4-6; pl. xliv, figs. 1, 2, 5; pl. xlix, fig. 2; pl. clxix, figs. 6,	7.
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retusa, Fontaine, 1889, p. 144, pl. lix, fig. 10.	bid.
rhombifolia, Fontaine, 1889, p. 138, pl. lii, fig. 5; pl. liv, fig.	1.
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rhombiloba, Fontaine, 1889, p. 144, pl. lix, figs. 6, 7; pl. lx, fig	, 8.
	oid.
sphenopteroides, Fontaine, 1889, p. 143, pl. lviii, fig. 6.	bid.
squarrosa, Fontaine, 1889, p. 143, pl. lix, fig. 3.	oid.
varians, Fontaine, 1889, pl. lii, figs. 2-4; pl. liii, figs. 1-3; pl.	liv.
	oid.
	oid.
Tillæphyllum dubium, Newberry, 1895, p. 109, pl. xv, fig. 5.	
Amboy Clay; New Jersey, U.S	.A.
Todea? saportanea, Lesquereux, 1874, p. 48, pl. xxix, figs. 1	
(=Lomatia saportanea, Lesquereux, 1876 B.)	
Dakota Group; Kansas, U.S	
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Upper Cretacecus; Protection Island, Cana	da.
— Dicksoniana, Heer, 1871, p. 1182; & 1874 A, p. 70, pl. xx	iii,
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Torreya dicksonioides (spelt Torreia), Dawson, 1883, p. 21, pl. ii, fig. 4. (Re-named Tumion dicksonivides by Knowlton, 1898.) Upper Cretaceous; North-West Territory, Canada. - falcata, Fontaine, 1889, p. 235, pl. cxiii, fig. 4. (Re-named Tumion falcatum by Knowlton, 1898.) Potomac Formation; Virginia, U.S.A. --- oblanceolata, Lesquereux, 1883, p. 30, pl. i, fig. 2. (Re-named Tumion oblanceolatum by Knowlton, 1898.) Dakota Group (?); Colorado, U.S.A. --- parvifolia, Heer, 1874 A, p. 71, pl. xvii, figs. 1, 2. Kome Beds; Greenland. — venusta, Yokoyama, 1894, p. 230, pl. xxii, figs. 11, 12, 12 α. Neocomian; Japan. - virginica, Fontaine, 1889, p. 234, pl. cix, fig. 8. (Re-named Tumion virginicum by Knowlton, 1898.) Potomac Formation; Virginia, U.S.A. Trametes Pini, Conwentz, 1892, pp. 13, 21, pl. vii, fig. 1. (=Trametites Senonian; Sweden. Pini, Meschinelli, 1892.) Trametites Pini, Meschinelli, 1892, p. 747. (= Trametes Pini, Conwentz, 1892.) Trapa? cuneata, Knowlton, 1900 A, p. 64, pl. v, fig. 6. Montana Formation; Wyoming, U.S. 4. ---- ? microphylla, Lesquereux, 1876 c, p. 369; & 1878, p. 295, pl. lxi, figs. 16-17 a. Tricalycites major, Hollick, 1905 c, p. 416, pl. lxxii, figs. 3-7. Cretaceous; Long Island, U.S.A. - papyraceus, Newberry MS. in Hollick, 1894, p. 63, pl. clxxx, fig. 8; & Newberry, 1895, p. 132, pl. xlvi, figs. 30-38. Amboy Clay; Woodbridge, U.S.A. Tricarpellites striatus, Newberry, 1895, p. 132, pl. xlvi, figs. 9-13. Ibid. Trichomanes Riccioides, Heer, 1871, p. 1182 [nomen nudum]. Atane Beds: Greenland. Trichopitys sp., Nathorst, 1885, p. 286, text-fig. 4. Ibid. \_\_\_\_ sp. ?. Kerner, 1896, p. 52, pl. iv, fig. 5. Cretaceous; Lesina, Dalmatia. Trichosporites Conwentzi, Felix, 1894, p. 273. Upper Cretaceous; Sweden. Triplaris cenomanica, Engelhardt, 1892 A, p. 96, pl. ii, fig. 5. Quader; Freiberg, Saxony. Triploporella Fraasi, Steinmann, 1880, p. 136, pl. v, figs. 1-8. Turonian; Lebanon. --- Fraasi minor, Steinmann, 1899, p. 193, text-figs. 38, 39. Cenomanian: Mexico. Tsugites magnus, Fliche, 1896, p. 211, pl. ix, fig. 2. Albian; Clermont, France. Tumion carolinianum, Berry, 1908 B, p. 383, text-figs. 1-3. Middle Cretaceous; North Carolina, U.S.A.

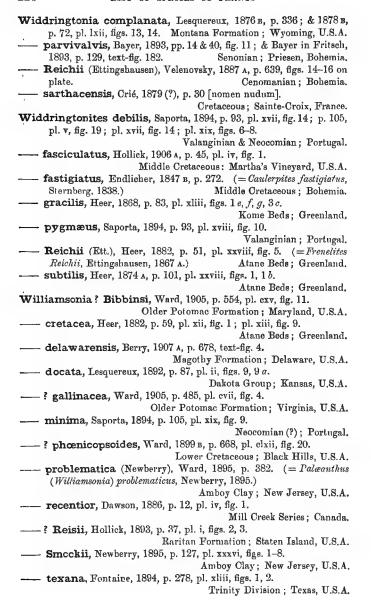
Tumion densifolium (Dawson), Knowlton, 1898, p. 234 (re-naming Torreya densifolia, Dawson, 1883). - dicksonioides (Dawson), Knowlton, 1898, p. 234 (re-naming Torreya dicksonioides, Dawson, 1883). - falcatum (Fontaine), Knowlton, 1898, p. 234 (re-naming Torreya falcata, Fontaine, 1889). - oblanceolatum (Lx.), Knowlton, 1898, p. 234 (re-naming Torreya oblanceolata, Lesquereux, 1883). - virginicum (Fontaine), Knowlton, 1898, p. 234 (re-naming Torreya virginica, Fontaine, 1889). Typha? sp., Hollick, 1894, p. 63, pl. clxxx, fig. 9. Upper Cretaceous; Long Island, U.S.A. — gigantea, Unger, 1870 A, pl. iii, fig. 6. (Includes supposed Algæ from Quadersandstein.) Typhacites lævis, Saporta, 1890, p. 3, pl. xiii, figs. 5, 5 a. Uppermost Cretaceous; France. ---- rugosus, Saporta, 1890, p. 3, pl. xiii, figs. 4, 4 a. Typhæloipum cretaceum, Krasser, 1896, p. 127, pl. xii, fig. 4. Cenomanian; Kunstadt, Moravia. Tysonia marylandica, Fontaine, 1889, p. 193, pls. claxiv-claxx. ( = Cycadeoidea marylandica [(Font.), Capellini & Solms-Laubach, 1892.) Potomac Formation; Maryland, U.S.A. \_Ulmiphyllum Brookense, Fontaine, 1889, p. 312, pl. clv, fig. 8; pl. clxiii, fig. 7. Potomac Formation; Virginia, U.S.A. - crassinerve, Fontaine, 1889, p. 313, pl. clviii, figs. 6, 7. - densinerve, Fontaine in Ward, 1899 B, p. 689, pl. clxix, fig. 7. Lower Cretaceous; Black Hills, U.S.A. -- tenuinerve, Fontaine, 1889, p. 313, pl. clviii, fig. 1. Potomac Formation; Virginia, U.S.A. Ulmophyllum latifolium, Ettingshausen, 1887 A, p. 184, pl. ix, flgs. 6-8. Upper Cretaceous; New Zealand. — planaræfolium, Ettingshausen, 1887 A, p. 184, pl. ix, figs. 2-5, 4 a. --- priscum, Dawson, 1894, p. 59, pl. viii, fig. 28. Upper Cretaceous; Vancouver Island, Canada, Ulmus dubia, Dawson, 1883, p. 27, pl. vii, fig. 29. Ibid. \_\_\_\_ præcursor, Dawson, 1887, p. 28, pl. ii, fig. 11. Laramie Formation; Canada. Uredinites cretaceus, Velenovsky, 1889, p. 29, pl. iii, fig. 14. (= Puccinites cretaceus, Velenovsky, 1889, same figure.) Perucer Beds; Bohemia. Vaccinium sp.?, Kerner, 1896, p. 55, pl. v, fig. 5. Cretaceous; Lesina, Dalmatia.

Vesquia Tournaisii, Bertrand, 1883, p. 1382; & 1883 A, p. 294.

Cenomanian; Tournai, France.

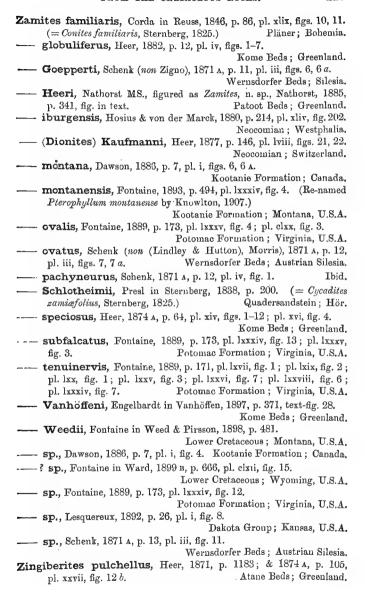


Viburnum oxycoccoides, Dawson, 1886, p. 17,
Upper Cretaceous (?); Canada.  — platanoides, Lesquereux, 1878 B, p. 224, pl. xxxviii, fig. 8. (Re-
named Platanus platanoides (Lesquereux), Knowlton, 1898.)
Laramie Formation; Wyoming, U.S.A.  ——? problematicum, Knowlton, 1900 A, p. 71, pl. xix, fig. 4.
Montana Formation; Utah, U.S.A.  robustum, Lesquereux, 1892, p. 120, pl. xx, figs. 4-6.
Dakota Group; Kansas, U.S.A.  rotundifolium, Lesquereux, 1876 c, p. 368; & 1878 B, p. 225, pl. xxxvii, fig. 12; pl. xxxviii, fig. 10; pl. lxi, fig. 22.
Montana Formation; Wyoming, U.S.A.  —— Saskatchuense, Dawson, 1888, p. 35.
Belly River Series; Canada.
sphenophyllum, Knowlton in Lesquereux, 1892, p. 123, pl. liii, fig. 4. Dakota Group; Kansas, U.S.A.
subrepandum, Hosius & von der Marck, 1880, p. 190, pl. xl, fig. 158. (=Phyllites curvinervis, Hosius, 1870 a.)
Lower Senonian; Westphalia.
vetus, Saporta, 1894, p. 204, pl. xxxvi, fig. 9.
Upper Albian; Portugal. — zyziphoides, Heer, 1883 A, p. 34, pl. 1x, fig. 2.
Patoot Beds; Greenland.
Vitex pentadactyla, Velenovsky, 1882 A, p. 213 [nomen nudum].  Cretaceous; Bohemia.
Vitiphyllum crassifolium, Fontaine, 1889, p. 308, pl. cl, figs. 9, 10.  Potomac Formation; Virginia, U.S.A.
multifidum, Fontaine, 1889, p. 309, pl. clxxiii, figs. 1-9.
Potomac Formation; Maryland, U.S.A.
- parvifolium, Fontaine, 1889, p. 309, pl. clxxii, figs. 11, 12. Ibid.
Vitis Bruneri, Ward, 1887, p. 69, pl. xxxii, figs. 1, 2.
Laramie Formation; Wyoming, U.S.A.
— Carbonensis, Ward, 1887, p. 70, pl. xxxii, fig. 3. Ibid.
Volubilites lusitanicus, Lorenz, 1901, p. 566. (= Tænidium lusitanicum, Heer, 1881.)  Cretaceous; Portugal.
Weichselia erratica, Nathorst, 1891, p. 24, pl. i, figs. 1-4.  Lower Cretaceous; Mecklenburg, nr. Rostock.
Ludovicæ, Stiehler, 1857, p. 453; & 1858, p. 73, pl. xii; pl. xiii. Senonian; Quedlinburg, Saxony.
reticulata (Stokes & Webb), Ward, 1899 s, p. 651, pl. clx, figs. 2-4.
(= Pecopteris reticulata, Stokes & Webb, 1824.)
Lower Cretaceous; Black Hills, U.S.A.
1)



figs. 5-7; pl. clxv,fig. 5. Potomac Formation; Virginia, U.S.A. Winchellia triphylla, Lesquereux, 1893, p. 209, pl. viii, fig. 1. Upper Cretaceous; Montana, U.S.A. Woodwardia crenata, Knowlton, 1900 A, p. 22, pl. iii, fig. 3. Montana Formation; Wyoming, U.S.A. --- sp., Knowlton, 1900 A, p. 23, pl. iii, fig. 9. Ibid. Xylolithes, Debey, 1848. (Cancelled by Debey, 1850, p. 117.) Xylomites aggregatus, Heer, 1882, p. 21, pl. xxix, figs. 11, 11 b. Atane Beds : Greenland. - ellipticus, Ettingshausen (non Feistmantel), 1867 A, p. 243, pl. i, fig. 7. Cenomanian; Niederschoena, Saxony. Yatesia Guillaumoti, Fliche, 1896, p. 143, pl. i, fig. 4. Albian; Clermont, France. — Morrisii, Carruthers, 1870, p. 688, pl. lv, figs. 3-6. (= Cycadeoidea Yatesii (Morris), Carruthers, 1867.) Lower Greensand; Potton. Yezonia vulgaris, Stopes & Fujii, 1910, pp. 23-32, pl. ii, figs. 5-8; pl. iii, fig. 9; pl. iv, fig. 19; text-figs. 8-11. Upper Cretaceous; Hokkaido, Japan. Yezostrobus Oliveri, Stopes & Fujii, 1910, pp. 33-41, pl. i, figs. 8-9; pl. iii, figs. 10-13; text-figs. 12-14. Yuccites fractifolius, Saporta, 1894, p. 110, pl. xix, fig. 20 a. Lower Cretaceous (?); Portugal. --- ? sp., Miquel, 1853, p. 53, pl. i, fig. 3. Cretaceous; Belgium, Zamia macrocephala, Lindley & Hutton, 1835, p. 117, pl. exxv. (= Zamiostrobus macrocephalus, Endlicher, 1841.) Greensand; Kent. - ovata, Lindley & Hutton, 1837, p. 189, pl. cexxvi A. (=Zamiostrobus ovatus, Schimper, 1870.) \_\_ sussexiensis, Mantell, 1843, p. 34; & 1846, p. 51, pl. ii, fig. 1. (= Pinites sussexionsis, Carruthers, 1866 B.) Lower Greensand; Sussex. — Washingtoniana, Ward, 1895 A, p. 350, pl. ii, fig. 6. Potomac Formation; Virginia, U.S.A. Zamiophyllum Buchianum (Ettingshausen), Nathorst, 1890, p. 46. pl. ii, figs. 1-2; pl. iii; pl. iv, fig. 2; & Yokoyama, 1894, p. 223. pt. xx, fig. 1; pl. xxii, figs. 1, 2; pl. xxiii, fig. 6; pl. xxvii, figs. 5 a, b; pl. xxviii, figs. 1, 2. (= Pterophyllum Buchianum, Ettingshausen, 1852 c, & Dioonites Buchianus, Bornemann, 1856.) Neocomian; Japan, \_\_\_ Naumanni, Nathorst, 1890, p. 47, pl. v, fig. 1; & Yokoyama, 1894, p. 225 pl. xxi, fig. 3; pl. xxvi. Q 2

Zamiopsis brevipennis, Richter, 1904, p. 14, pl. i, fig. 9; & 1905 pl. i, fig. 9. Senonian; Quedlinburg, Sa	1, 3;
Potomac Formation; Virginia, U	
— laciniata, Fontaine, 1889, p. 164, pl. lxvi, figs. 1, 5-8.	Ibid.
—— longipennis, Fontaine, 1889, p. 164, pl. lxi, fig. 8.	Ibid.
— petiolata, Fontaine, 1882, p. 166, pl. lxvi, fig. 3.	Ibid
— pinnatifida, Fontaine, 1889, p. 161, pl. lxi, fig. 7; pl. lxii, f pl. lxiv, fig. 2; pl. lxvii, fig. 2.	ig. 5; Ibid.
Zamiostrobus elongatus, Ettingshausen in Reuss, 1854, p. 740   n	
nudum]. Cenomanian; Moletein, Mo	
— familiaris, Bronn in Roemer, 1852, p. 50. (= Conites fami Sternberg, 1825.)	
- Guerangeri, Brongniart, 1849 A, p. 111 [nomen nudum].	
Cretaceous; F	rance.
— Loppineti, Fliche, 1896, p. 139, pl. i, fig. 3, text-fig. 2.	Lanous
Albian; Clermont, F	rance.
macrocephalus, Endlicher, 1841, p. 72. (= Zamia macrocep	ohala.
Lindley & Hutton, 1835.) Greensand;	
- ovatus, Schimper, 1870, p. 203. (= Zamia ovata, Lind	ev &
Hutton, 1837.) Greensand;	Kent,
pippingfordensis, Unger, 1850 A, p. 300 (described by F	litton.
1836, p. 181, pl. xxii, fig. 10.) Lower Greensand; S	
— sp., Otto, 1854, p. 38, pl. v, fig. 5. Dippoldiswalde, Sa	
Zamites acutipennis, Heer, 1871, p. 1181; & 1874 A, p. 66,	
figs. 3, 4, 5 a; pl. xvi, fig. 10. Kome Beds; Gree	
— affinis, Schenk, 1871 A, p. 13, pl. iii, fig. 8.	
Wernsdorfer Beds;	Silesia.
alaskana, Lesquereux, 1889, p. 32, pl. x, fig. 4.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Neocomian: A	laska.
apertus, Newberry, 1891, p. 199, pl. xiv, figs. 4, 5.	
Kootanie Formation; Montana,	U.S.A.
arcticus, Goeppert, 1866, p. 134, pl. ii, figs. 9, 10. Recor	ded by
Heer from Kome Beds, Gree	
— bohemicus, Velenovsky, 1889, p. 6, pl. iii, figs. 7, 8. (= Cy	cas sp.,
Velenovsky, 1887 A.) Cenomanian; Bo	
— borealis, Heer, 1874 A, p. 66, pl. xiv, figs. 13, 14; pl. xv, figs.	3. 1, 2.
Kome Beds.; Gre	
— brevipennis, Heer, 1871, p. 1181; & 1874 A, p. 67, pl. xv, 9, 10.	figs. 8, Ibid.
concinnus, Heer, 1871, p. 1181 [nomen nudum].	Ibid.
crassinervis, Fontaine (non Germar), 1889, p. 172, pl. lxix,	
pl. lxxxiii, fig. 3. Potomac Formation; Virginia,	
- distantinervis, Fontaine, 1889, p. 172, pl. lxxxiii, fig. 4.	Ibid.



Zizypius Beckwithii, Lesquereux, 1005, p. 125, pi. xix, iig. 5.
Laramie Formation; Colorado, U.S.A.
cliffwoodensis, Berry, 1907 A, p. 676, text-fig. 5.
Magothy Formation; New Jersey, U.S.A.
dakotensis, Lesquereux, 1892, p. 167, pl. xxxvi, figs. 4-7.
Dakota Group; Kansas, U.S.A.
elegans, Hollick, 1894 A, p. 58, pl. clxxvii, figs. 9, 10.
Cretaceous; Long Island, U.S.A.
groenlandicus, Heer, 1883 a, p. 42, pl. lxii, fig. 20.
Patoot Beds; Greenland.
— Lewisiana, Hollick, 1894 A, p. 58, pl. clxxx, fig. 13.
Cretaceous; Long Island, U.S.A.
oblongus, Hollick, 1906 A, p. 92, pl. xxxiv, figs. 9, 10.
Middle Cretaceous; Long Island, U.S.A.
Zonarites digitatus (Brongniart), Geinitz. (= Fuccides digitatus,
Brongniart.) Recorded from American Cretaceous by Lesquereux,
1873, p. 421; & 1874, p. 44, pl. i, fig. 1.
Zonopteris comptoniæfolia, Debey, 1848, p. 117 [nomen nudum].
(=Didymosorus comptonifolius, Debey & Ettingshausen, 1859 B.)
Senonian; Aix, Rhenish Prussia.
digitatus (Brongn.), Geinitz. Recorded from Dakota Group,
Kansas, by Lesquereux, 1873, p. 421.
Goepperti, Debey, 1848, p. 117; & Debey & Ettingshausen, 1859 B,
p. 213, pl. iv, figs. 11-20. Senonian; Rhenish Prussia.
Goepperti heteropleura, Debey, 1848, p. 117 [nomen nudum].
Ibid.
Zoophycos Brianteus, Massalongo, 1855, p. 51, pl. iii, figs. 1, 2.
Upper Cretaceous,
emarginatus, Cocchi. See Sacco, 1888, p. 186.
— Targionii, Savi & Meneghini. See Sacco, 1888, p. 186.
— tenuestriatus (Heer). See Sacco, 1888, p. 186.
Villæ, Massalongo, 1855, p. 49, pl. ii, figs. 1, 2. Upper Cretaceous.
Zosterites Agardhianus, Brongniart, 1828, p. 115.
Cretaceous; Sweden.
— æquinervis, Debey, 1849, p. 299 [nomen nudum].
Senonian; Aix, Rhenish Prussia.
angustifolius, Ettingshausen, 1893, p. 137; & 1895, p. 13, pl. i,
fig. 2. Cretaceous; Australia.
— Bellovisana, Brongniart, 1824, p. 317, pl. xxi, fig. 7.
Greensand; Isle of Aix, France.
cauliniæfolia, Bronguiart, 1828 A, p. 204. Ibid.
— elongata, Brongniart, 1824, p. 317, pl. xxi, fig. 6. Ibid.
lineata, Bronguiart, 1824, p. 318, pl. xxi, fig. 8. Ibid.
Senonian; Dévoluy, France.
Miqueli, Debey MS. in Mourlon, 1881, p. 133 [nomen nudum].
Senonian; Limburg, Belgium.
Senoniali: Limburg Relation

Zosterites multinervis, Debey, 1848 A, p. 119 [nomen nudum].

Senonian: Aix. Rhenish Prussia.

- Orbigniana, Brongniart, 1824, p. 317, pl. xxi, fig. 5.

Greensand; Isle of Aix, France.

- Orbignyanus, Bronn in Bronn & Roemer, 1852, p. 49. (=Zosterites Orbigniana, Brongniart, 1824, & Z. cauliniæfolia, Brongniart, 1828 A.)
- --- vittata, Debey, 1848, p. 119 [nomen nudum].

Senonian; Aix, Rhenish Prussia.

#### ADDENDA ET CORRIGENDA.

- Page 50. Under Abietites cretacea, for "Dakota" read "New Mexico."
  - Under Abietites Glueckii, add Richter, 1904, p. 19, pl. i, fig. 14.
     Senonian; Quedlinburg, Saxony
  - Add Asplenium distans, Heer, recorded Dawson, 1886, p. 5, pl. iii, fig. 7.

Kootanie Formation; Canmore, Rocky Mts., Canada.

- Add Bignonia Westerhausiana, Richter, 1904, p. 20, pl. ii, figs. 1-5.
   Senonian; Quedlinburg, Saxony.
- 78. For "Cassia præ-mennonia" read "Cassia præ-mennonia,"
- 80. Under Cedroxylon manehildense for "xc" read "xv."
- 113. Add Dryopter's parvifolia (Fontaine), Knowlton, 1898, p. 92; & in Ward, 1905, p. 541, pl. exiv, fig. 7. (=Aspidium parvifolium, Fontaine, 1889.)
  Potomac Formation; Virginia, U.S.A.
- 115. Under Equisetum Zeilleri, add Richter, 1904, p. 18, pl. i, figs. 2 & 12.
  Senonian; Quedlinburg, Saxony.
- 125. Under Geinitzia microcarpa, for "1905" read "1904."
- Under Laurus crassinervis, add Dawson, 1886, p. 10, pl. iii, figs. 3, 3 A.

# DESCRIPTIVE CATALOGUE

OF

# CRETACEOUS PLANTS.

### Group THALLOPHYTA.

Plants with great variety of external morphology, but without differentiation into true root, stem and leaf. The plant body may consist of a single cell, a small number of cells, or may be a large, complex organism many feet in length. The higher members of the group show both internal and external structures suggestive of some of the features of the Vascular plants, but they are distinguished from them by the absence of true roots and the lack of differentiated vascular elements. Reproduction may be by simple, unisexual spores, but in the majority of forms there is some trace of sexuality, and in some the reproductive processes are exceedingly complex.

As no member of the group produces woody or sclerenchymatous elements, the parts are all soft and are very liable to decay. This perhaps accounts for their scarcity among the fossils, though many purely physical appearances have been mistaken for them. Few reliable determinations of members of this group have been made, except among the Calcareous Algæ, which secrete for themselves a coating of carbonate of lime.

# Class ALGÆ.

Plants with vegetative body varying from a single cell to a complex, multicellular structure. All forms are provided with chlorophyll, which is masked by other pigments in some of the groups.

Among living Algæ the majority of the larger forms are marine and the group preponderates largely in the sca-water flora as a whole. It is, therefore, all the more surprising that so few good fossil examples are recorded. That Algæ existed from Palæozoic times is rendered certain by the fact that one of the earliest known plants with its internal structure preserved is an alga, Nematophycus (Dawson), Carruthers. The theory that all terrestrial vegetation originated from aquatic forms in the earliest times, is also generally accepted. The mere delicacy of the tissues forming the Algæ is not a sufficient explanation for the remarkable poverty of their petrifaction, for equally delicate parts of the higher plants are preserved; and it is probably due to the chemical nature of their cell-walls that they are so ill represented in fossil floras.

Although large numbers of appearances in the rocks have been described which are not Algæ but are of purely physical origin, many writers have hastily discarded specimens which merit retention because of the unsatisfactory nature of most fossil Algæ. Seward (1894) has discarded all the numerous generic names given to algal impressions and proposed the comprehensive generic name Algites for everything. For the Cretaceous plants this course does not seem advisable, because a number of the described species are at least as good as many of the fossil fernspecies which are retained by all palæobotanists, while at the same time it is recognised that their affinities are very imperfectly known.

The literature dealing with fossil Algæ is extensive, and much of it is highly controversial. In a Swedish paper in 1874 Nathorst showed how many of the fossil "algæ" were simply physical markings, and he continued his work in 1881. To this Saporta replied in 1882 with a large monograph on the fossil Algæ. Nathorst published a more exhaustive paper in 1886 in reply both to Saporta and the others who continued to maintain the algal nature of the remains. In 1895 Fuchs contributed a large paper on "Fucoiden und Hieroglyphen", and stated that after an exhaustive examination of all the "fucoids" in most museums, he did not discover a single carbonised specimen, and he denied the statements made by other workers that such specimens are frequent. His opinion was that all the so-called

fucoids of the Flysch were of physical origin or due to animal tracks. Rothpletz more recently (1896) has taken a moderate view, and maintains the algal nature of many of the species. These papers are not confined to a consideration of the Cretaceous Algæ, but deal with the whole range of forms.

The Calcareous Algæ are naturally, by reason of their hard encrustations, of most importance geologically, and they do really play a part as "rock builders" (see Seward, 1894 B). Several undoubted genera and species of this group have been described from Cretaccous rocks.

# Order DIATOMACEÆ.

[Living family.]

Minute unicellular Algæ sometimes living in colonies, but generally free swimming. The shape of the cell is exceedingly various, and particularly characterised by the thickened cellwall which is in two parts, fitting together like a pill-box and its lid. This shell is generally silicified and often flattened and ornamented. In the living cell the chloroplast has a yellowish-brown colour.

Fossil diatoms are recorded in enormous masses in several Tertiary and a few Cretaceous deposits. In some cases, indeed, a fine whitish earth consists almost entirely of myriads of the minute silicified tests.

Ehrenberg (1841) pointed out long ago that many species of diatoms existed in the Upper Cretaceous, several apparently identical with living species, and all belonging to still living genera. He gives a list (p. 119) of the species and their localities which is too long for quotation, but a few names selected from it will indicate the distribution and character of the forms he records:—

Amphitetras antediluviana, from the Chalk Marl of Oran, Coscinodiscus Argus, from the Chalk Marl of Caltanisetta, Coscinodiscus eccentricus, from the Chalk Marl of Oran, Coscinodiscus Putina, from the Chalk Marl of Zante, Fragilaria rhabdosoma, from the White Chalk of Gravesend,

Fragilaria striolata, from the White Chalk of Gravesend, Gallionella aurichalcea, from the White Chalk of Rügen, Gallionella sulcata, from the Chalk Marl of Caltanisetta, Navicula ventricosa, from the Chalk Marl of Oran.

Cayeux (1892, 1897) has recorded numerous diatoms from the Upper Cretaceous zones of Ammonites mammillaris and A. inflatus in the Paris basin. In his specimens the silicified tests are sometimes replaced by calcareous matter. Hitherto there are no authentic records of diatoms earlier than the Upper Cretaceous.

### Order SIPHONEACEÆ.

[Living family.]

Unicellular Algæ of very various size and external form. The thallus may be much branched and is often of considerable size, but it is not separated by cell-walls into distinct cells. Many of the genera are encrusted with a calcareous coating, and the majority of them are marine.

The Siphoneaceæ are the most important group of fossil Algæ, and a number of well preserved and microscopically studied forms have been described by Rothpletz, Steinmann, and others from the calcareous members of the order. The soft-celled, microscopic forms belonging to this affinity have not been recorded among fossils.

### Suborder CODIACE ZE.

# Genus BOUEÏNA, Toula.

[Toula, Sitzb. k. Akad. Wiss. Wien, math.-naturwiss. Cl. 1884, vol. 88, p. 1319. For the recognition of its plant-nature see Steinmann, Bericht. naturf. Ges. Freiburg, vol. 11, pp. 1-6, text-figs. 1-7.]

The genus is monotypic and cannot therefore be diagnosed apart from the species. It was described by Gümbel, Zittel and others as a sponge, and the reference of the fossil to the Algæ is due to Steinmann.

This genus, which shows such similarity to the living Halimeda, is of special interest because previous to its recognition no member of the Codiaceæ had been determined on the basis of its structure, prior to the Tertiary.

### Boueina Hochstetteri, Toula.

1884. Boueïna Hochstetteri, Toula, Sitzb. k. Akad. Wiss. Wien, math.-naturwiss, Cl., vol. 88, pp. 1319-1324, pls. vii-ix.

1901. Boueïna Hochstetteri, Steinmann, Bericht. naturf. Ges. Freiburg, vol. 11, pp. 1-6, text-figs. 1-7.

In this alga the simple, unbranched body of the calcareous thallus is 10-20 mm. long, 2-3.5 mm. thick, and is penetrated by a system of branching canals which are connected without any visible segmentation. The cross-section is circular or oval, and in the central region the little branched canals of the axis run more or less nearly parallel, in the periphery they are very much smaller and stand at right angles to the surface and are very freely dichotomously branched. The ultimate branches are arranged very close together and form a kind of cortical zone. In large specimens the central canal-system is replaced by a simple cavity. Between the canals is an undifferentiated calcareous skeleton.

Horizon.-Upper Neocomian.

LOCALITY.—Servia.

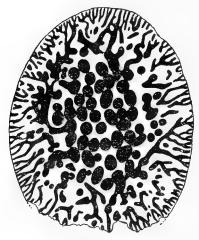
The general habitat of this Neocomian member of the Codiaceæ appears to have been similar to that of the modern Halimeda.

Steinmann's figures (Steinmann, 1901, text-figs. 2 and 3), reproduced here as text-fig. 1, show the general character of the cross-section of these algæ and illustrate clearly the remarkable likeness to the living *Halimeda*, a similar section of which is shown in text-fig. 2.

Fructifications for this fossil are not recorded, but this is a point which tends further to strengthen its supposed affinity to *Halimeda*, for in the living genus the spores are not developed on the parts already penetrated by calcareous matter.

It may be remarked that though, as Steinmann points out, there is a great similarity between the fossil and the living genus, the parts compared are only the "stalk" region of the plants and this is similar in several of the Codiaceæ.

Α.

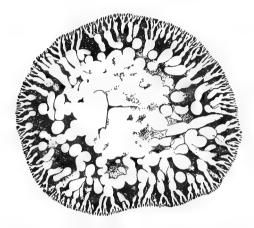


В.



Text-fig. 1.—Boueina Hochstetteri, Toula. A. Transverse section showing the character of the central and the peripheral canals. × 28. B. Cross-section of a specimen with a central cavity, and showing clearly the dichotomous branching of the peripheral canals. × 28. After Steinmann.

Other Codiaceæ.—To the Codiaceæ should perhaps be added the impression described by Lorenz v. Liburnau as *Halimeda* Fuggeri (Lorenz, 1897) from the Flysch. Further specimens of this fossil were described by Lorenz in 1902, and the generic



Text-fig. 2.—Cross-section through a living Halimeda for comparison with the fossil Boueina Hochstetteri. × 24. After Steinmann.

name Halimedides suggested for them. The specimens certainly have the external appearance of a Halimeda, but they exhibit no internal structure, and their plant origin does not appear to be entirely beyond doubt.

### Suborder DASYCLADACEÆ.

### Genus NEOMERIS, Lamouroux.

[Living genus.]

A member of the Dasycladaceæ with unbranched, cylindrical stem, thickly encrusted. It consists of a thick-walled stemcell with no cross walls or constrictions, with densely packed whorls of 32-80 side "branches." These carry usually one terminal and short-stalked sporangium and two sterile paraphysis-like segments with swollen ends.

### Neomeris cretacea, Steinmann.

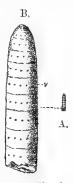
1899. Neomeris cretacea, Steinmann in Felix & Lenk, Beitr. Geol. Palæont. Mexico, p. 200, text-figs. 42-46.

The largest portions of the calcareous cylinder of the fossil are 3-4 mm. long and 2 mm. thick, but they were probably 10 mm. long when alive. They are perfectly cylindrical or slightly compressed. The tubes are penetrated by a central cavity which varies from 1·2-1·4 mm. in diameter. The wall is often as much as 0·5 mm. thick, and is penetrated by numerous radially arranged branches of two kinds, the one simple and uniform, about 0·05-0·06 mm. in diameter, and the other in fewer numbers and of flask-like shape with a blind ending.

Horizon.-Upper Cenomanian.

LOCALITY. - Mexico.

The form much resembles the Eocene representatives of the genus.



Text-fig, 3.—Munieria baconica, v. Hantken. External appearance.
A. Nat. size; B. enlarged. After Deecke,

Genus **MUNIERIA**, v. Hantken in litt. (see Deecke). [Neues Jahrb. f. Min., 1883, vol. 1, p. 9.]

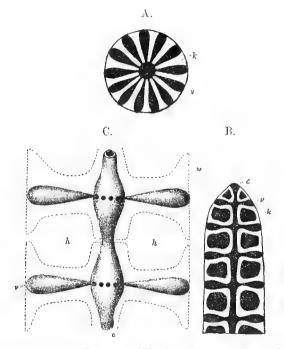
The genus contains the single species M. baconica, and is not diagnosed by the original author.

# Munieria baconica, v. Hantken in Deecke.

1883. Munieria baconica, v. Hantken in litt., Deecke, Neues Jahrb. f. Min., vol. 1, pp. 9-11, pl. i, figs. 4-10. 1897. Munieria baconica, Hauptfleisch in Engler & Prantl, Pflanzenfamil., p. 56.

1906. Munieria cf. baconica, Oswald, Geol. Armenia, plate to face p. 234.

This alga is cylindrical, from 5-7 mm. long, with a blunt apex. It is composed of numerous symmetrical, similar zones,



Text-fig. 4.—Munieria baconica, v. Hantken.
A. Cross-section showing k, chalky skeleton, v, verticillate canals.
B. Longitudinal section, c, central canal.
C. Restoration of a small part of the alga: c, axial canal; v, verticillate canals which contained the living portion of the alga.
The perforated outline represents the calcareous skeleton, w, with spaces, h, in it. After Deecke.

each about 0.5 mm. thick, so that there are 10-14 of these in a specimen. The diameter is about 0.75 mm., and each zone is perforated by about a dozen round pores. In good specimens

there is no external ornamentation, and, except for the pores, no external sign of zones.

The external appearance of the fossil is seen in numerous cases where it has weathered out, so that hand-specimens are covered with individuals of *Munieria*. The internal structure can be studied by means of sections. In section it is seen that there is an axial canal in the centre of each segment, from which the lateral canals radiate. In longitudinal section they are seen more clearly, and the arrangement of the living tissues is evident (see text-fig. 4).

Horizon.—Cretaceous.

LOCALITY .- Bakony.

Deecke gives no concise definition of the genus, but describes it at some length and places it near *Gyroporella*. In the neighbourhood of Bakony the alga is so abundant it is said practically to compose one of the beds of the Cretaceous. Hovelacque (1900) gives a figure of a section of fossiliferous calcite from the Urgonian of the Sub-Alps in which are fragments of what he considers may be *Munieria* of Deecke, but his published figures are not conclusive.

Details of the reproductive branches are unknown. In the same matrix Deecke noticed several segments differing somewhat from the normal ones, which he took to be the reproductive branches of the same species.

- V. 11063. A small hand-specimen, and a microscopic slide of the same, described as *Munieria* by Oswald (1906). The sketch which he gives (see plate to face p. 234) is unsatisfactory, the actual specimen, while showing much more definite structure than does the figure, being still of such an obscure nature that it is highly doubtful if it is an alga. In the matrix are numerous other fragments (not noted by Oswald) which bear a closer resemblance to a *Lithothamnium* than does his specimen to *Munieria*. No accurate determination seems possible at present.
  - (?) Urgonian; Armenia. Presented by Dr. F. Oswald and H. F. B. Lynch, Esq., 1904.

### Genus DIPLOPORA, Schafhäutl.

[Süd-Bayerns Lethæa Geogn. Petrefacten, 1863, pp. 324, 327.]

The generic name was first given to forms which Schafhäutl included among the Bryozoa. Later by Gümbel and others it was superseded by *Gyroporella*, but the older name was revived for some of the algal forms which are characteristic of the Trias; and the name is also used by Lorenz and Arbenz for the Cretaceous species which they describe as follows:—

### Diplopora Mühlbergii, T. Lorenz.

1902. Diplopora Mühlbergii, T. Lorenz, Bericht Naturf. Ges. Zürich, vol. 12, pp. 19 [52]-20[53], figs. 3-7.

1908. Diplopora Mühlbergii, Lorenz, Arbenz, Vierteljahrsschrift Naturf. Ges. Zurich, vol. 53, pp. 387-392, figs. 1-5.

Slender, somewhat bent tube-like forms, average length about 2 mm. (?) From the hollow axial space open whorls of branch canals. The branches vary, but are principally simple. Branch whorls are separated some distance from each other and the branches are not superimposed in vertical series. In a variety described by Arbenz (1908) the average diameter is 0.3-0.5 mm., with a thickness of 0.1-0.15 mm. for the wall.

Horizon.—Barremian and Aptian.

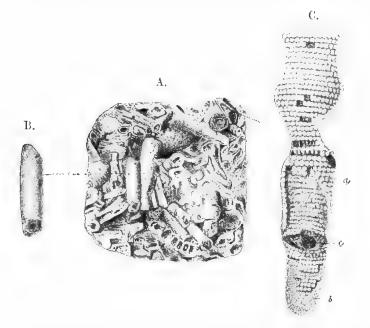
Locality.—Wildkirchli and elsewhere, locally very abundant. Lorenz notes that the discovery of this form in the Cretaceous is of interest, because hitherto algæ of this generic type have been known in numbers only from the Trias, with isolated specimens from the Jura. According to Arbenz (1908) the alga is extremely abundant in the Lower "Schrattenkalk" (Up. Barremian) and Aptian of some districts, and may even form one third of all the organisms in a deposit. He says (p. 392) "Die Diploporen der untern Kreide scheinen somit auf das Barrémien und Aptien in neritischer Facies beschränkt zu sein," where they are a typical facies fossil.

The name D. Mithlbergii probably covers several species which can only be separated when more detailed work is available.

### Genus TRIPLOPORELLA, Steinmann.

[Neues Jahrb. f. Min., 1880, vol. 2, p. 130.]

Steinmann gave no generic diagnosis of this genus, but described it fully, and his original description was much extended



Text-fig. 5.— Triploporella Fraasi, Steinmann. A. A portion of the Lebanon Cretaceous rock with specimens of Triploporella, natural size. B. A fragment of Triploporella, × 2. C. An enlarged fragment showing a, the primary branching, b, the secondary branch system, c, the axis oroken across. After Steinmann.

by the examination of further specimens from Mexico (see Steinmann, 1899). According to him *Triploporella* is a member of the Dasycladaceæ of Turonian and Cenomanian age, which had a wide geographical distribution, as is evidenced by the two localities in which it has been found, viz. Syria and Mexico. It has some of the characters both of the Acetabularieæ and the

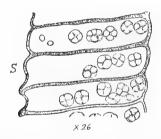
Dasycladacem, and may be considered as a form intermediate between the two groups.

### Triploporella Fraasi, Steinmann.

1880. Triploporella Fraasi, Steinmann, Neues Jahrb. f. Min., vol. 2, p. 136, pl. v, figs. 1-8.

1899. Triphoporella Fraasi, Steinmann in Felix & Lenk, Beitr. Geol. Palæont. Mexico, pp. 190-195, text-figs. 29-40.

A form with closely packed series of whorled branches bearing spores, and with finely divided branches below and beyond these. The whole structure probably about 30 mm. long, and



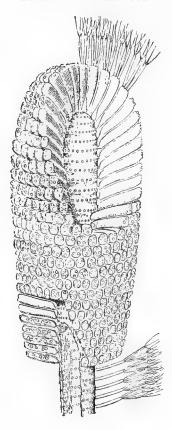
Text-fig. 6.—Triploporella Fraasi, Steinmann. Portion of a radial section of some of the whorled branches. s, the axial stem. In the cavities of the "branches" are the "mother spores" dividing into four. After Steinmann.

of a diameter of about 5 mm. at the distal, and 1.5-2 mm. at the proximal end.

From the calcarcous specimens of Mexico further details were obtainable, and the verticillate series of sporangial branches contained "spores."

The restoration of the plant given in Steinmann's second paper, reproduced here in text-fig. 7 (p. 246), shows the vertical axis and series of whorled branches, both spore-bearing and divided.

Horizon.—Turonian and Cenomanian. Locality.—Lebanon, Syria, and Mexico



Text-fig. 7.—Triploporella Fraasi, Steinmann. Reconstruction.  $\times$  4.

After Steinmann.

Associated with the Siphoneæ is the rather doubtful genus Goniolina, first described from the Jurassic, and later recorded in Cretaceous deposits. Saporta originally named it as an inflorescence of a proangiosperm, and its external appearance is suggestive of the spines of an Echinoderm. It is now generally accepted among the Siphoneæ, but as it is primarily a Jurassic plant it will not be considered here.

Gyroporella (Gümbel) is another genus recorded in the Cretaceous, but it was first described from Permian rocks. It is outwardly similar to Neomeris, but with less complex structure.

#### Tribe ACETABULABIE # ?

The extremely problematic fossils which have been placed in the genus Gyrophyllites, founded by Glocker in 1841 for some Jurassic specimens, have a number of representatives in true Cretaceous deposits, and also in the Flysch. Heer (1877) founds and figures three species (pl. lviii), G. obtusifolius, G. Oosteri, and G. pentamerus, from the Swiss Cretaceous. His genus Discophorites, with the species D. angustilobus and D. Fischeri, shows no characters really to separate it from the previously named "genus," and must be included in "Gyrophyllites." Lorenz (1901) considers the "genus" at some length and definitely places it in the Acetabularieæ, although Solms-Laubach, in his classical monograph on the Acetabularieæ (Solms-Laubach, 1901), does not discuss these fossils, but notes their extremely problematic nature in his text-book. Lorenz (l. c.) determines several new species from the Flysch deposits.

# Order PHÆOPHYCEÆ (?)

[Living family.]

Algæ, almost entirely marine, with a large, branched and complex thallus. Multicellular, with some cell-differentiation. Chromatophores golden brown in living cells.

# Genus CHONDRITES, Sternberg.

[Flora d. Vorwelt, 1838, p. 25.]

Algæ, or fossils which suggest algæ, with a much-branched dichotomous or sympodial thallus which is cylindrical.

The essential feature of the fossils described under this generic name is the cylindrical form of the branches. These are not flattened in the rock like most plant-remains, and they often lack all traces of carbonaceous material. They are frequently

distinguished from the surrounding matrix by their different colour—black in a light rock or white in a dark one.

Brongniart (1828 A) described the genus under the name Fucoides in his § Gigartinites as follows (p. 20):-"Fronde rameuse, à branches presque-cylindriques, charnues, jamais membraneuses." He divided the group into nine species, to the number of which many later writers have added. Much that was said about the fossil Algæ as a whole (p. 234, ante) applies particularly to this section, and it does not appear necessary to enter into an exhaustive recapitulation of all the "species" described, even among the Cretaceous specimens of Chondrites. In contrast to most of the earlier writers who tended to multiply genera and species of fossil Algæ, Ettingshausen (1863) pointed out that a number of the so-called Algæ, placed in this genus by Fischer-Ooster and others, cannot be accepted. He also noted the difficulty of distinguishing between many of the forms to which distinct specific names have been given, because of the intermediate stages which occur to connect them.

In the controversy on the algal nature of fossil Algæ, the genus Chondrites is one of the most disputed. Nathorst (1886 A) maintains that the forms are not algo and supports this view with weighty arguments. For example, he points out how the very nature of the matrix, particularly in the Flysch deposits, shows that the beds must have accumulated rapidly, while Algæ of the nature of the supposed "Chondrites" do not inhabit troubled waters. He also makes much of the argument that the specimens are not carbonised and show no trace of vegetable substance even when they occur in rocks which contain other true vegetable fossils which are carbonised. This objection. however, seems to be sufficiently answered by the fact that even among living seaweeds the decay takes place in a different manner from that of the higher plants, owing to the different chemical composition of the plant-body in the two types of vegetation.

After having read most of the extensive and highly controversial literature on the subject, and having seen a large number of specimens in most of the leading museums, my conclusion is that the "genus" Chondrites does contain "species" which are truly the remains of algæ, though many of those described for the genus are probably purely physical phenomena.

And further, that if this conclusion should ultimately prove incorrect and all of them prove to be other than algoe, it is still useful to retain the genus for the present, and wise to keep it in the established position which is as good as any other on a priori grounds, and has the advantage of being long recognised.

In his exhaustive monograph on the Algæ of the Flysch Rothpletz (1896) proposes the generic name *Phycopsis* to replace the old-established *Chondrites*. His objection to the latter is very just, namely, that it suggests affinities which are not proven. His own name, however, is not free from the same objection. As he brings forward no new facts which throw light on the affinity of the plant, by the code of nomenclature the older name should be retained. According to my suggestion regarding the names of doubtful species, the name is printed in gothic type \*

The Flysch deposits which are so peculiarly rich in "Alga" have been the subject of a monograph by Rothpletz (1896) to which reference should be made. They will not be specially treated in the present volume, and indeed most of them are Tertiary, or doubtfully Cretaceous in age.

### Chondrites Targionii (Brongniart), Sternberg.

1828. Fucoides Turgionii, Brongniart, Hist. Végét. Foss., p. 56, pl. iv, figs. 4-6.

1828. Fuccides Targionii, Brongniart, Prodrôme, p. 20.

1835 (read 1828). Fucoides Targionii, Mantell, Trans. Geol. Soc. [2] vol. 3, p. 210.

<sup>\*</sup> In a paper in the Annals of Botany for October 1911, I brought forward the arguments that form the foundation of my suggestion—which is, that all fossil plants for which there is no good, scientific reason for association with given families and genera, and to which nevertheless names indicative of such affinities have been given, should be printed henceforth in Gothic character. This would instantly indicate the doubtful nature of the fossil without altering and multiplying the nomenclature, and would avoid the use of a trinomial system or any of the other more cumbrous devices which have been suggested. It would also immediately appeal to those not specially trained in palæobotany when looking through lists of names, and set them on their guard against drawing unwarranted conclusions.

1838. Chondrites Targionii et varr., Sternberg, Versuch Flora Vorwelt, p. 25, pl. ix, fig. 3.

1853. Chondrites Targionii, Unger, Denkschr. k. Akad. Wiss. Wien, vol. 4, p. 79, pl. xxv, fig. 5.

1858. Chondrites Targionii (excl. some of Sternberg's varr.), Fischer-Ooster, Fossilen Fucoiden, p. 46, pl. viii, figs. 8 a, 8 b.

1863. Chondrites Vindobonensis, varr., Ettingshausen, Fossilen Algen Wiener Karpathen-Sandsteines, p. 457.

1869. Chondrites Targionii, Schimper, Traité Paléont. Végét., vol. 1, p. 170, pl. iii, fig. 7.

1877. Chondrites Targionii (et varr.), Heer, Flora Foss. Helvetiæ, p. 155; pl. lx, fig. 5; pl. lxi, fig. 9; pl. lxii, figs. 1-10; pl. lxiii, figs. 6 a, 12-17.

1880. Chondrites Targionii, Hosius & v. d. Marck, Palæontogr., vol. 26, p. 130, pl. xxiv, figs. 1, 2.

1896. *Phycopsis Targioni*, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 48, p. 887.

1900. Chondrites Targioni, Zeiller, Élém. Palæobot., p. 33, fig. 6.

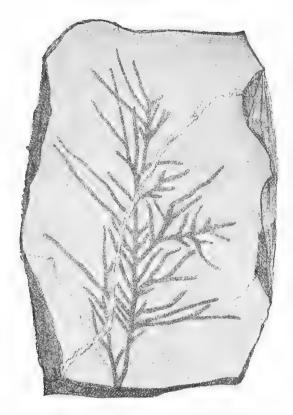
Heer's diagnosis is perhaps the most concise:—" Chondrites fronde irregulariter dichotome et pinnatim ramosa, ramis alternis et oppositis, hinc inde valde approximatis ·75-1·5 mm. latis, longitudine valde inaequalibus, ramulis nonnullis praelongis, angulo acuto egredientibus, errectis, strictis."

Horizon,-Lower Greensand-Flysch.

LOCALITY.—Widely distributed over Europe.

Many of the specimens which have been referred to this species are certainly worthless, and are probably worm-burrows or animal-tracks of the kind demonstrated by Nathorst. Further, a number of specimens have been placed in subspecies or varieties which show no real features distinctive enough to separate them from the "species" which is recognisedly of little scientific value in any case. There are, nevertheless, a number of fossils which can at once be recognised as characteristic and which it is useful to place together under one well-established name.

The specimens in the Museum are principally from the Lower Greensand of Bignor Park, one of the earliest known localities for the fossil, which Mantell described and figured in several of his works. The thallus is whitish and highly calcareous, and the specimens are less suggestive of plants than many of the others included in the species, though they come within the terms of the diagnosis.



Text-fig. 8.—Chandrites Targianii (Brongn.), Sternberg. A characteristic specimen of the "species." Nat. size. After Brongniart.

V. 88, V. 88 a. Numerous ramifications of the branched "thallus" penetrating the sandy matrix in various directions. The branches are white in colour and cylindrical. In section they appear as circles scattered in the matrix. Lower Greensand; Bignor Park, Sussex.

Egerton Coll., 1882.

5570, 5573, 5574, 5575, 5576, 5577, 5579, 5579 a. Similar specimens from the Greensand. *Mantell Coll*.

10780, 9424, 9426, V. 11507, V. 11508, V. 11509, V. 11510, V. 11511, V. 11512. Similar specimens from the Greensand; Bignor (?).

Mantell Coll. (?)

# Chondrites intricatus (Brongniart), Sternberg.

# [Plate I, fig. 1 b.]

1824. Fuccides intricatus, Brongniart, Observations sur Fuccides, p. 311, pl. xix, fig. 8.

1828. Fuccides intricatus, Brongniart, Hist. Végét. Foss., p. 59, pl. v. figs. 6, 7, & 8.

1828. Fuccides intricatus, Brongniart, Prodrôme, p. 20.

1838. Chondrites intricatus, Sternberg, Versuch Flora Vorwelt, p. 26, pl. vii (non vi), fig. 3.

1858. Chondrites intricatus, Fischer-Ooster, Fossilen Fucoiden, p. 44, pl. viii, fig. 1.

1863. Chondrites Vindobonensis, varr., Ettingshausen, Fossilen Algen Wiener Karpathen-Sandsteines, p. 457.

1869. Chondrides intricatus, Schimper, Traité Paléont. Végét., vol. 1, p. 172, pl. iii, fig. 9.

1877. Chondrites intricatus (et varr.), Heer, Flora Foss. Helvetiæ, p. 157, pl. lxiii, figs. 1-10.

1896. Phycopsis intricata, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 48, p. 888, pl. xxii, fig. 7. (Chondrites æqualis should probably be included here.)

Heer's diagnosis may be quoted:—" Chondrites fronde subtili, caespitose, tripinnatim ramosa, ramulis ·25—5 mm. latis, longitudine inaequalibus, setaceis, angulo acuto egredientibus, approximatis."

Horizon.—Cretaceous—Flysch.

LOCALITY.—Widely distributed in the Swiss Alps and elsewhere.

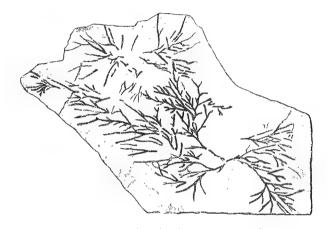
Ettingshausen (1863) concluded that this species is really a younger form of *Chondrites Targionii*, but Rothpletz's more recent and more detailed work does not support this view. The species was one of the earliest to be recognised among fossil algæ, and its characteristic size and appearance make it easily distinguished from most of the other "species" of supposed algæ.

In our Pl. I, fig. 1 a slab of Cretaceous Flysch shale is illustrated, showing numerous fragments (b) of the plant with other algæ.

53020. A number of fragments of the tufted, branching thallus, together with an Algites, figured in Pl. I, fig. 1 b. Cretaceous Flysch; Sievering.

Ettingshausen Coll., 1879.

V. 11513. Several fragments of the branching thallus, one showing the tufted form very well. Cretaceous Flysch; Sievering. Ettingshausen Coll., 1881.



Text-fig. 9.—Chandrites intricatus (Brongn.), Sternberg.
A characteristic specimen. Nat. size. After Heer.

V. 11514, V. 11515. Numerous branches and fragments of thallus lying in various directions and penetrating the slab of matrix. Cretaceous Flysch; Sievering.

Ettingshausen Coll., 1881.

### .Chondrites patulus, Fischer-Ooster.

[Plate I, fig. 2.]

1858. Chondrites patulus, Fischer-Ooster, Foss. Fucoiden, p. 48, pl. viii, figs. 6, 7.

1877. Chondrites patulus, Heer, Flora Foss. Helvetiæ, p. 156, pl. lxiii, figs. 18-24.

Heer's diagnosis may be quoted:—" *Chondrites* fronde erecta, pinnatim vel bipinnatim ramosa, ramis approximatis, sub angulo fere recto egredientibus, inaequilongis, '75–1 mm. latis."

Horizon.—Cretaceous—Flysch.

LOCALITY. - Fähnern, etc., Switzerland.

This "species" is readily separated from the others by the arrangement of the lateral branches at right angles to the larger branches.

V. 11516. In Pl. I, fig. 2, a small fragment from the Upper Cretaceous is illustrated to show the branched thallus, which much resembles the original description.



Text-fig. 10.—Chandrites patulus, Fischer-Ooster. Showing the rectangular form of the branches. Nat. size. After Fischer-Ooster.

# Genus ALGITES, Seward (emend.).

[Catal. Mesoz. Plants Brit. Mus., Wealden, pt. i, 1894, p. 4.]

Seward's diagnosis, if emended, may be taken:—A generic term to cover a presumably composite genus for those flattened impressions "which in all probability belong to the class Algæ, but which by reason of the absence of reproductive organs, internal structure, or characters of a trustworthy nature in the determination of affinity, cannot be referred with any degree of certainty to a particular genus or family."

The separation of the cylindrical forms into another group may at times seem arbitrary, but it is convenient at present. Where all the "genera" are based on very unsatisfactory data, it is well to use a clearly marked and stable character.

### Algites furcatus (Brongn.), comb. nov.

### [Plate I, fig. 1 a.]

1824. Fucoides (Sphærococcus?) furcatus, Brongniart, Observations sur Fucoides, p. 309, pl. xix, fig. 3.

1828. Fucoides furcatus, Brongniart, Hist. Végét. Foss., p. 62, pl. v. fig. 1.

1828. Fuccides furcatus, Brongniart, Prodrôme, p. 20.

1838. Chondrites furcatus, Sternberg, Versuch Flora Vorwelt, p. 27.

1858. Chondrites furcatus (some varieties), Fischer-Ooster, Fossilen Fucoiden, p. 51, pls. ix-x.

1863. Chondrites affinis & C. genuinus, Ettingshausen, Foss. Algen Wierer Karpath.-Sandst., pp. 460, 465.

1869. Chondrides furcatus, Schimper, Traité Paléont. Végét., vol. 1, p. 169, pl. iii, fig. 8.

1890. Phycopsis affinis, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 48, p. 885, pl. xxii, figs. 1, 2.

Algites with thallus branching alternately, the side branches averaging 3 mm. in width and with rounded ends, springing from a larger branch 4-7 mm. in diameter. The main branches are characterised by dichotomous division, and the ultimate branches are sympodial.

Horizon.—Cretaceous—Flysch.

Locality.—Switzerland and other mid-European countries.

Rothpletz states that it is the fucoid with the widest thallus among those of the Flysch deposits. It appears to me to be one of the best established of the doubtful group.

53020. A branching thallus showing some of the ultimate ramifications with their rounded ends, illustrated in Pl. I, fig. 1 a, with Chondrites intricatus. Cretaceous Flysch; Sievering. Ettingshausen Coll., 1879.

# Algites sp.

41410. Very obscure markings on a block of white chalk, which may possibly be fucoidal impressions. Upper Chalk; Charlton, Kent. Purchased, 1863.

# Algites?

V. 3947. Unidentifiable fragments of plant tissue in a mass together. On sandstone. They may, however, be macerated fragments of higher plants. Senonian; Baumberg, Westphalia.

Purchased, 1899.

Note.—Several more or less doubtful species which could technically be placed in the genus *Algites* have been described from time to time. Their bibliographic details, however, are not worth bringing together. Many of the "species" will be found in the list of Cretaceous species given at the beginning of this volume.

### Order RHODOPHYCEÆ—CORALLINACEÆ.

Algæ, principally marine, with branched and sometimes very complex thallus. Multicellular, with some cell-differentiation and a more highly organised reproductive system than in the other groups of Algæ. The calcareous encrusting of the thallus and the form of growth give a number of the species the appearance of corals. The chromatophores (as in all Rhodophyceæ) contain a red colouring-matter.

### Genus **LITHOTHAMNIUM**, Philippi.

[Living genus.]

A coralline Alga with an encrusting, spreading thallus growing on to the sub-stratum, with irregular, coralline, or branching upward outgrowths. Thallus entirely calcified and as hard as stone. Basal part of thallus with a regular arrangement of the cells in rows. Conceptacles developed in the upward growing part of the thallus, generally in series of growth-zones.

As the living genus was long unrecognised as belonging to the Algæ, it is not surprising that fossil representatives of the group remained even longer without detection. It was in 1874 that the first systematic description of the fossil forms of Lithothamnium appeared by Gümbel under the title "Die sogenannten Nulliporen." In this work seven Cretaceous species are described in addition to those of Tertiary and Jurassic age. Rothpletz (1891 B), under the title "Fossile Kalkalgen aus den Familien der Codiaceen und der Corallineen," has added the only other important contribution to the subject, in which he describes four new Cretaceous species of Lithothamnium. Solms-Laubach in his 'Text Book of Fossil Botany' says that "we shall do well.... to put them all together as

Lithothamnium ramosissimum," but he wrote before the more detailed measurements and study of the fossils had been undertaken. Seward (1898) gives some of Rothpletz's figures and describes L. mamillosum, Gümbel, in his more recent Textbook.

Lithothannium has not hitherto been recognised in British Cretaceous rocks, although it is so widely spread in European deposits of the same age. Though no specimens have been identified in the British Museum Collection, I have had the privilege of examining Prof. Rothpletz's original specimens in Munich. In several of these slides the internal structure is remarkably clear, and there appear to be several true species among those described from the Cretaceous, even if all the eleven species are not really distinct.



Text-fig. 11.—Lithothannium manillosum, Gümbel, to show external features. Nat. size. After Gümbel.

### Lithothamnium mamillosum, Gümbel.

1871. Lithothamnium mamillosum, Gümbel, Abhandl. k. Akad. Wiss. München, vol. 11, p. 41, pl. ii, figs. 7 a, 7 b.

1891. Lithothannium mamillosum, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 43, p. 315, pl. xvii, fig. 7.

1898. Lithothamnium mamillosum, Seward, Fossil Plants, p. 188, text-fig. 32 A, p. 155.

Algal thallus irregularly branched, nodular and crust-like, the branches about 5 mm. long and 4.5 mm. thick. In microscopic section the individual cells of the perithallium are  $5.5-8~\mu$  in diameter and of square outline, and of the hypothallium about  $18~\mu$  in length.

Apparently sterile.

As text-fig. 11 shows, this irregular coralline mass may well have been mistaken for an animal nullipore. Previous to

Gümbel's work, it had been described as Cellepora bipunctata, Goldf., Membranipora bipunctata, Blainv., Discopora bipunctata, Edw., and Marginaria bipunctata, Roem.

The internal structure was studied in more detail by



Text-fig. 12.—Lithothamnium mamillosum, Gümbel, to show microscopic details of the tissue of the perithallium. × 80. After Rothpletz.

Rothpletz (1891 B), in the hope of detecting reproductive organs, but the available specimens seem to be sterile.

Horizon.—Uppermost Cretaceous (Danian).

Locality.—Petersberg, near Maestricht.

Type.—Goldfuss' specimen of Cellepora bipunctata in the Palæontological Museum, Old Academy, Munich.



Text-fig. 13.—Lithothamnium perulatum, Gümbel. External appearance.

Natural size. After Gümbel.

# Lithothamnium perulatum, Gümbel.

1871. Lithothamnium perulatum, Gümbel, Abhandl. k. Akad. Wiss. München, vol. 11, p. 44, pl. ii, figs. 11 a, 11 c.

Thallus somewhat flat, spreading and irregularly encrusting. In section the cells are rectangular and  $10 \, \mu \times 8 \, \mu$  in diameter.

Horizon.—Uppermost Cretaceous (Danian).

Locality. - Maestricht.

Type.—Bavarian State Collection, Old Academy, Munich.

#### Lithothamnium procoenum, Gümbel.

1871. Lithothamnium proceenum, Gümbel, Abhandl. k. Akad. Wiss. München, vol. 11, p. 43, pl. ii, fig. 10.

The thallus with irregularly divided branches about 3-4 mm. in diam, springing from a thicker stock. In section the cells are rectangular and about  $12 \mu \times 8 \mu$ .

The specimen was originally known as the Nullipore Ceriopora dichotoma, Goldf.

It is probable that the species Lithothannium parisiense, Gümbel, described from a small fragment, and separated from



Text-fig 14.—Lithothamnium proceenum, Gümbel. External form.

Natural size. After Gümbel.

this because its cells are 9  $\mu \times 6~\mu$  in diameter, really belongs to this species.

Horizon.—Uppermost Cretaceous (Danian).

Locality. —Petersberg, near Maestricht.

Type.-Palæontological Museum, Old Academy, Munich.

## Lithothamnium palmatum (Goldf.), Gümbel.

1826. Nullipora palmata, Goldfuss, Petrefacta Germaniæ, p. 20, pl. viii, fig. 9.

1871. Lithothamnium palmatum, Gümbel, Abhandl. k. Akad. Wiss. München, vol. 11, p. 284, pl. D iv, figs. L 1 a & L 1 b.

Irregularly branched, the branches much grown together, and the ends of the branches somewhat swollen. In section the cells are rectangular and  $7~\mu \times 8~\mu$ .

Horizon.—Upper Cretaceous.

Locality.—Gosau, and in France.

Type.—Goldfuss' Nullipora palmata, in the University Collections at Bonn.

It is probable that Lithothamnium racemosum (Goldf.), Gümbel, p. 284, pl. p iv, figs. L 2 a & L 2 b, is really a small



Text-fig. 15.—Lithothamnium palmatum (Goldf.), Gümbel. External form.

Natural size. After Gümbel.

fragment of this species. The size of the cells, viz.  $9 \mu \times 10 \mu$  instead of  $7 \mu \times 8 \mu$ , is the only apparent difference and hardly seems sufficient basis for a specific distinction where the internal details are so slightly described.

## Lithothamnium Goldfussi, Gümbel.

1871. Lithothannium Goldfussi, Gümbel, Abhandl. k. Akad. Wiss. München, vol. 11, p. 285, pl. p iv, figs. L 3 a & L 3 b.

A large, spreading form with wing-like expansions and short branches with rounded ends. The cells are exceptionally large, and measure 70  $\mu\times24~\mu.$ 

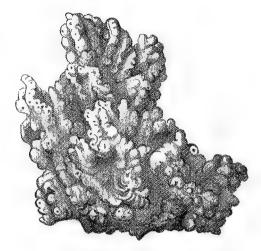
LOCALITY.—In the Cretaceous deposits, apparently several localities.

Type.—Goldfuss' specimens in the University Collections of Bonn.

## Lithothamnium cenomanicum, Rothpletz.

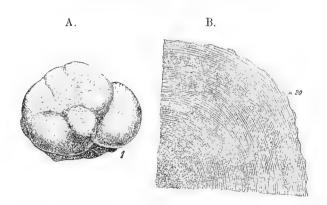
1891. Lithothamnium cenomanicum, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 43, p. 313, pl. xv, figs. 1, 2, 16.

The thallus consists of rounded, mamillose masses which are outwardly quite distinct from the other species of *Lithothamnium*.



Text-fig. 16.—Lithothamnium Goldfussi, Gümbel. External form.

Natural size.



Text-fig. 17.—Lithothamnium cenomanicum, Rothpletz. A. External appearance, natural size. B. Cross section showing a zone of tetraspore development, × 2 After Rothpletz.

The growth is very regular and there is no growing over of the perithallium through the hypothallium. In section the cells are  $12-14~\mu \times 20-25~\mu$ . The tetraspores lie in a number of concentric zones in the tissues and are 50-60  $\mu$  by 70-80  $\mu$ .

Horizon. -- Cenomanian.

Locality. - St. Paterne, Sarthe, France.

Type.—Palæontological Museum, Old Academy, Munich.

Rothpletz considers that this species should be placed near L. amphiroæformis, L. nummuliticum, L. ramosissimum, and L. racemus, because of the size of the cells, though in its outward form it differs from these.

#### Lithothamnium turonicum, Rothpletz.

1891 Lithothamnium turonicum, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 43, p. 313, pl. xv, figs. 9, 13.

Small, dichotomously branching form, the branches 3 mm. thick by 12 mm. long. When broken across the concentric banding is visible to the naked eye, and these concentric rings are the tetraspore zones. Cells 9-10  $\mu$  by 12-15  $\mu$ , and in the hypothallium up to 30  $\mu$  long. The tetraspores are 30-35  $\mu$  wide and 75  $\mu$  high.

Horizon .- Turonian.

Locality. -- Beausset, Var. France.

Type.-Paleoutological Museum, Old Academy, Munich.

Both the external shape and the internal cells scparate this immediately from *L. cenomanicum*, while the other forms to which it has an external likeness have not been studied by means of sections, so that this form stands rather isolated.

## Lithothamnium amphiroæformis, Rothpletz.

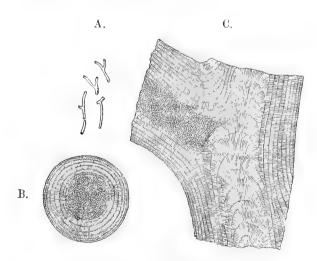
1891. Lithothamnium amphiroæformis, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 43, p. 314, pl. xv, figs. 10, 14.

Very delicate cylindrical branches, dichotomously divided, and only 0.5 mm. in diameter. The cells are  $12-15\,\mu$  wide and  $20-30\,\mu$  long, and in the hypothallium up to  $100\,\mu$  in length. No tetraspores or conceptacles have been recognised.

The fact that the cells are so much larger in this form than in L. turonicum, although it is externally of smaller size, precludes the likelihood of this species being a juvenile stage



Text-fig. 18.—Lithothamnium turonicum, Rothpletz. A. External form, natural size. B. Part of the thallus to show the cells and tetraspore zone, × 25. After Rothpletz.



Text-fig. 19.--Lithothamnium amphiroæformis, Rothpletz. A. External form, natural size. B. Transverse section, and C. Longitudinal section, showing the zones of cells. B  $\times$  45 and C  $\times$  50. After Rothpletz.

of L. turonicum, as might at first be imagined from the external similarity.

Horizon .- Turonian.

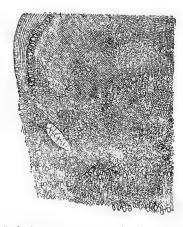
LOCALITY. -Beausset, Var, France.

Type.-Palæontological Museum, Old Academy, Munich.

#### Lithothamnium gosaviense, Rothpletz.

1891. Lithothamnium gosaviense, Rothpletz, Zeitschr. deutsch. geol. Ges., vol. 43, p. 315, pl. xvii, fig. 3.

An encrusting form, taking on the shape of the object it covers; the upper surface branching or warty. The cells are



Text-fig. 20.—Lithothannium gosaviense, Rothpletz. Section showing several tetraspore zones in the tissue.  $\times$  30. After Rothpletz.

 $9-12~\mu$  wide and  $9-12~\mu$  high, but in the hypothallium up to  $25~\mu$  long. The tetraspores are  $30-40~\mu$  wide and  $50-70~\mu$  high. Tetraspores are developed once the perithallium reaches a thickness of  $300~\mu$ .

Horizon .- Schonian.

LOCALITY .- Gosau and Martigues, fairly common.

Type.-Palæontological Museum, Old Academy, Munich.

#### ALGÆ?

#### Indeterminate remains.

V. 11065. Supposed fuccidal remains in a coarse sandstone from North Kop Khan, Armenia (see Oswald, 1906, p. 339). The fragments are carbonised and permeate the matrix, and are entirely unrecognisable. They resemble fragments of higher plants rather than Algæ.

Armenia.

Presented by Dr. F. Oswald and H. F. B. Lynch, Esq., 1904.

DESCRIBED CRETACEOUS "ALG.E" OF EXCEEDINGLY DOUBTFUL NATURE.

The following may represent traces of Alge: -

Caulerpites bryodes, Debey & Ettings.
Caulerpites Eseri, Unger.
Chondrites cretaceus, Presl.
Chondrites dichotomus, Feistmantel.
Chondrites divaricatus, Debey & Ettings.
Chondrites filiciformis, Lesquereux.
Chondrites neocomensis, Heer.
Chondrites polymorphus, Hosius & v. d. Marck.

Chondrites Riemsdyki, Miquel.
Chondrites serpentinus, Heer.
Confervites Woodwardi, Mantell.
Fucoides æqualis, Brongniart.
Fucoides strictus, Brongniart.
Halyserites gracilis, Debey &
Ettings.
Sphærococcites Meyrati, FischerOoster.

The following appear to be poor impressions of Dicotyledonous or Monocotyledonous plants:—

Delesserites Thierensi, Miquel, in Hosius & v. d. Marck, and in Debey & Ettings. (dicot. leaf?). Fuccides Brardii, Brongniart (leafy twig of gymnosperm). Fuccides tuberculosus, Brongniart. Haliserites Reichii, Sternberg. Laminarites polystigma, Debey & Ettings.

Lockmophycus caulerpoides, Debey & Ettings.

Neosporangium foliaceum, Debey & Ettings.

Neosporangium undulatum, Debey & Ettings.

The following may be of vegetable origin, but are indeterminable:—

Aulacophycus pedatus, Heer. Caulerpa Lehmanni, Heer. Caulerpites tenuis, Fischer-Ooster (probably a small conifer twig). Chondrites Bosqueti, Miquel. Chondrites elegans, Debey & Ettings. Chondrites flexuosus, Newberry (rootlets?). Chondrites jugiformis, Debey & Ettings. Chondrites rigidus, Debey & Ettings. Chondrites subcurvatus, Hosius & v. d. Marck (rootlets?). Chondrites subintricatus, Debey & Ettings. (rootlets?). Chondrites subverticillatus, Presl in Sternberg. Chondrites vagus, Debey & Ettings. (rootlets).

Confervites æquensis, Debey & Ettings. Confervites dubius, Berry. Delessertites Hampeanus, Stiehler. Fuccides Brongniarti, Mantell. Fucoides cauliformis, Fritsch (pithcast?). Fucoides lygnbianus, Brongniart. Fucoides orbignianus, Brongniart. Gelidinium trajectomosanum, Debey & Ettings. Gyrochorte porrecta, de Stefani. Haliserites contortuplicatus, v. d. Marck. Keckia ambigua, Eichwald (fern petioles?). Phycodes sericeus, Debey & Ettings. Sphærococcites Laubei, Engelhardt.

(rootlets). | Sphærococcites pinnatifidus, Unger.

The following appear to be indeterminable as Algæ, and are

Caulerpites pyramidalis, Sternberg.
Caulerpites Diesingi, Unger.
Chondrites fusiformis, Fischer-Oost.
Codites neocomiensis, Saporta &
Marion.

probably the tracks of animals, trickling water, etc. :-

Confervites cæspitosus, Debey & Ettings.

Confervites ramosus, Debey & Ettings.

Cylindrites arteriæformis, Goeppert.
Cylindrites conicus, Hosius & v. d.
Marck.

Cylindrites dædaleus, Goeppert.
Cylindrites spongioides, Goeppert.
Fuccides? columnaris, Fritsch.
Fuccides funiformis, Fritsch.
Fuccides friburgensis, Heer.
Fuccides latifrons, Heer.

Fucoides strangulatus, Fritsch.
Keckia annulata, Glocker.
Keckia cylindrica, Otto.
Keckia nodulosa, Otto.
Keckia vesiculosa, Otto.
Münsteria Schneideriana, Goeppert.
Neomeris annulus, Böhm.
Nulliporites granulosus, Heer.
Tænidium alysioides, Hosius & v. d.
Marck.
Taonurus Saportaï, Dewalque.
Taonurus tenuestriatus, Heer.
Zonarites alcicornis, Fischer-Ooster.
Zoophycos Brianteus, Massalongo.
Zoophycos Villæ, Massalongo.

Hexagonaria senonica, Deecke (a

These lists do not comprise all the supposed Algæ from Cretaceous rocks, but include the majority of them and indicate the extent of the described material. Some synonyms and further

sponge).

"species," with references to the original descriptions, will be found in the list of Cretaceous plants at the beginning of the volume.

## Class FUNGI.

A group of plants parallel to the Algæ, ranging from unicellular to large multicellular forms. They are all without chlorophyll, unable to manufacture their own food, and are therefore parasitic or saprophytic.

In comparison with the numerous fossils, vegetable and otherwise, which have been described as Algæ, there are very few Cretaceous specimens which have been placed in the group of Fungi.

A few "species" of parasitic fungi have been described as having attacked several of the dicotyledonous leaves which are so numerous in Cretaceous times; and while it is possible that a few of these are in reality the remains of fungal infection-spots on the leaves, most of them suggest that they owe their origin to the accidents of petrifaction. In 1896, Krasser (p. 116, pls. xi-xii) described and figured some traces of fungi on the supposed Monocotyledon Typhæloipum cretaceum, but he refrained from naming them, and said "aus der Kreideformation ist bisher überhaupt kein einziger Pilz bekannt über dessen systematische Stellung man sich mit Sicherheit äussern könnte."

There are now known, however, undoubted fungal petrifactions. Most of these are found in the woods which have their anatomical structure preserved, and in which many of the cells are permeated by fungi. Among the petrified remains of the Japanese Cretaceous forests recently described by Stopes & Fujii (1910), parasitic fungi showing their reproductive organs have been discovered inhabiting the leaves and stems of the higher plants. These are among the best petrifactions of fungi known from any geological formation. Septate and aseptate forms are recorded, and Suzuki (1910) even figures the microscopic section of a petrifaction showing the details of an ascomycetous perithecium.

## Sub-Class Ascomycetes.

#### Order PYRENOMYCETES.

#### Genus PLEOSPORITES, Suzuki.

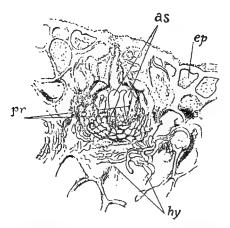
[Bot. Mag. Tokyo, vol. 24, 1910, p. 194.]

A monotypic genus with the following species.

#### Pleosporites Shirainus, Suzuki.

1910. Pleosporites Shirainus, Suzuki, Bot. Mag. Tokyo, vol. 24, pp. 191-194, text-figs. 2, 3, pl. vii, phot. 6.

Microscopic fungus in which the "hyphæ are well developed, septate, 2-5  $\mu$  in diameter. Perithecium formed under the



Text-fig. 21.—Pleosporites Shirainus, Suzuki. Perithecium cut longitudinally through the neck and orifice, showing asci (as); paraphyses (pr); hyphæ (hy); and epidermis of host (ep).  $\times$  370. After Suzuki.

hypoderma of the leaves of the host, well defined, spherical or somewhat flask-shaped, with an orifice, short-necked, thick-walled, the wall consisting of 5-7 or more irregular layers of thin-walled plectenchyma cells. Asci formed at the bottom

of perithecium, without development of stroma; paraphyses present."

Host.—Shoot of Cryptomeriopsis.

Horizon.—Upper Cretaceous.

LOCALITY.-Hokkaido, Japan.

TYPE.—In Prof. Fujii's collection in the Botanical Department, Science College, Imperial University, Tokio, Japan.

This fungus is found excellently preserved, infecting most of the shoots and leaves of the Cretaceous Gymnosperm *Crypto*meriopsis. The fructifications form under the hypoderm of the leaves, as is illustrated in the text-fig. 21.

The prevalence of this fungus in the remains of Cryptomeriopsis is commented on by Fujii (1910), who compares it with those infesting the living genus Cryptomeria, and considers that it may have been one of the factors in the extinction of the host.

V. 11988. A microscopic section of three leaves of Cryptomeriopsis antiqua, Stopes & Fujii, all affected by a fungus which is in all probability the same as that described by Suzuki as Pleosporites Shirainus infecting Cryptomeriopsis mesozoica, Suzuki. One of the fungal perithecia is cut nearly medianly in this section, and two other perithecia in the other leaves are cut very tangentially. Throughout the mesophyll of all the leaves there are numerous ramifying hyphæ which show their septations in many places. In their description of the host-plant, Cryptomeriopsis untiqua, Stopes & Fujii (1910, p. 55) noted the presence of this fungus but did not describe it further. It is of course possible that it is not of the same species as that more recently described by Suzuki (1910) on his species of Cryptomeriopsis; indeed, judging from the "biological species" of fungi which result from their adaptations to different hosts, it is more than likely that the two fungi would be classed as different species were they both alive. In the present imperfect state of our knowledge, however, it seems better to place this fungus in Suzuki's species. Pleosporites Shirainus, with a note to the effect that it inhabits a different host from that attacked by his original species, than to multiply specific names.

Upper Cretaceous; Hokkaido, Japan.

Presented by Dr. M. C. Stopes, 1910.

#### Genus PETROSPHÆRIA, Stopes & Fujii.

[Phil. Trans. Roy. Soc. Lond., 1910 B, p. 6.]

Monotypic genus with the following species.

## Petrosphæria japonica, Stopes & Fujii.

[Plate II.]

1909-10. Petrosphæria japonica, Stopes & Fujii, Proc. Roy. Soc. Lond., vol. 81, p 599 (abstract), and Phil. Trans. Roy. Soc. Lond., 1910 B, pp. 4-6, pl. i, figs. 1-6.

Microscopic fungus in which the "hyphæ are septate, 2–4  $\mu$  in diameter, the septa at right angles to the long walls. Many cells of the hyphæ irregularly swollen to a large size. These swollen cells usually thickened, and forming round or irregular nests of plectenchyma which has often extremely thick walls. These clusters, entirely within the tissue of the host, are principally in the periderm."

True spore-formation at present unknown.

Hosr.—Saururopsis, on the apparently underground stems.

Horizon.—Upper Cretaceous.

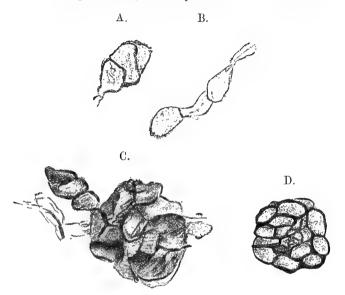
Locality. - Hokkaido, Japan.

Type.—British Museum (Natural History).

The stem of the Angiospermic genus Saururopsis was found to be thickly infested with septate hyphæ and also masses of reproductive or resting cells (see text-fig. 22).

No other fossil form is known with which this can be compared, but resting masses of thickened cells are not uncommon among living members of the Sphæriaceæ, with which it is probable the fossil has some affinity. Whether the fossil was a parasitic or saprophytic form is not determinable, but it appears to have lived underground, for the part of the host it was infesting was a rhizome or underground stem.

V. 11968. Holotype. Stopes & Fujii, 1910, Phil. Trans. Roy. Soc. Lond., pl. i, figs. 1, 2, 3, 5, & 6. There is little to add to the original description of this specimen. The stem affected by the fungus is one of several lying in the mineral matrix of the slide, but is the only one of the genus Saururopsis hitherto discovered. Throughout the cortex numerous blackened masses are to be seen which are possibly the effete clusters of the fungal tissues, but may be due to some secretion



Text-fig. 22.—Petrosphæria japonica, Stopes & Fujii. A & B. Ends of hyphæ cut off by transverse septum, and much swollen and thickened, C & D. Nests of thickened fungal "cells" in the periderm of the host showing the form in which they commonly occur. × 750. After Stopes & Fujii.

natural to the host-stem. All round the stem just below and within the periderm the hyphæ and reproductive masses have been petrified in the midst of their activity. Hyphæ with swollen ends similar to those in the text-figure are seen in considerable variety. Micro. section in slide 1 B2 in Stopes Coll.

Upper Cretaceous; Hokkaido, Japan.

Presented by Dr. M. C. Stopes, 1910.

V. 11967. Paratype. Section through the same stem with fungus. Slide 1 B1 in Stopes Coll.

Upper Cretaceous; Hokkaido, Japan.

Presented by Dr. M. C. Stopes, 1910.

V. 11969. Paratype; section through the same stem showing the fungus very widely spread through the tissues. The distribution of the fungus in the periderm layers of the host is illustrated well in this section, a small portion of which is drawn in. Plate II to show both the hyphæ and a few of the irregular thickened fungal cells. Slide 1 B4 in Stopes Coll.

Upper Cretaceous; Hokkaido, Japan.

Presented by Dr. M. C. Stopes, 1910.

V. 11970. Paratype; next section to V. 11969. This shows similar hyphal developments to those in V. 11969, and also has in the periderm layers a number of particularly well preserved nests of thickened cells (cf. text-fig. 22). Several of these are seen quite at the edge of the host-tissues, though the majority of them are more deeply seated. Slide 1 B5 in Stopes Coll.

Upper Cretaceous; Hokkaido, Japan.

Presented by Dr. M. C. Stopes, 1910.

V. 11971. Paratype. Slide 1 B10 in Stopes Coll. Upper Cretaceous; Hokkaido, Japan.

Presented by Dr. M. C. Stopes, 1910.

Doubtful members of the Pyrenomycetes:-

## Genus SPHÆRITES, Meschinelli.

[In Saccardo, Sylloge Fungorum, x, p. 753.]

Presumably with the characters of the living Sphæria, but incompletely known.

## Sphærites cretaceus (Heer), Meschinelli.

1883. Sphæria cretacea, Heer, Flora foss. Grönlands, p. 1, pl. lx, figs. 2, 2 b.

1892. Sphærites cretaceus, Meschinelli, Syll. Fung. foss., p. 753.

1902. Sphærites cretaceus, Meschinelli, Fungor. foss. omnium Iconog., p. 21, pl. x, figs. 6, 6 a.

"Sph. peritheciis numerosis, orbiculatis,  $1-1\frac{1}{2}$  mm. latis, ostiolo rotundato pertusis."

Host.—Leaf of Viburnum zizyphoides.

Horizon.—Upper Cretaceous (Patoot Beds).

LOCALITY. - Greenland.

Heer's description (1883 A, p. 1) is followed exactly by Meschinelli, who adds nothing new to the original short statements concerning this doubtful fossil. It is, however, as Heer's original figure shows, rather more likely to be a fungus than most of the circular markings on leaf-impressions which are described as such.

#### Sphærites problematicus (Knowlton), Meschinelli.

1892. Sphæria problematica, Knowlton in Lesquereux, Flora Dakota Group, p. 23, pl. xxxi, figs. 2, 2 a.

1895. Sphærites problematicus, Meschinelli, Fungi fossiles, p. 657.

1902. Sphærites problematicus, Meschinelli, Fungor. foss. omnium Iconog., p. 24, pl. x, figs. 26, 26 a.

"Peritheciis sparsis, punctiformibus, rotundatis vel ovalibus, raro triangulatis, 0.5-1 mm. diam., ostiolo centrali duobus annulis prominentibus circumdato."

Host.—Leaf of Sterculia Snowii.

Horizon .- Dakota Group,

LOCALITY.—Kansas, U.S.A.

While it is possible that this species may represent a true pyrenomycetous fungus, there is no real evidence for the view, and the markings on the leaf may be due to galls, and not fungal in their nature.

#### Order DISCOMYCETES.

## Genus PHACIDITES, Meschinelli.

[In Saccardo, Sylloge Fungorum, x, p. 776.]

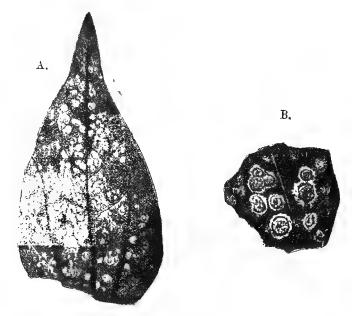
Presumably with the characters of the living genus Phacidium, but incompletely known.

#### Phacidites circumscriptus (Bayer), nom. nov.

1809. Phacidium circumscriptum, Bayer, Sitzungsber. k. böhm. Ges. Wiss. Prag, p. 7, text-fig. 3.

1901. Phacidium circumscriptum, Bayer in Fritsch & Bayer, Studien böhm. Kreidepfl., p. 67, text-fig. 3.

Fungus on leaves with apothecia scattered or in groups of two or three, mostly round or very slightly angled, 1.5-2 mm.



Text-fig. 23.—Phacidites circumscriptus (Bayer), nom. nov. A. Leaf of Aralia daphnophyllum with the fungus, natural size. B. Small portion about 3 times enlarged to show the character of the apothecia. After Bayer.

in diameter, with a definite border. In some cases grooves run from the border to a central depression.

Host.-Leaf of Aralia daphnophyllum.

Horizon.-Upper Cretaceous (Perucer Beds).

Locality.—Vyserovic, Bohemia.

In Bayer's original description (Bayer, 1899) he illustrates this fungus with two text-figures which show its very characteristic appearance. He states that it is rare, but readily distinguished from any of the other Cretaceous fungi.

Supposed fungus :-

#### Genus RHYTISMITES, Meschinelli.

[In Saccardo, Sylloge Fungorum, x, p. 781.]

Presumably with the characters of the living genus Rhytisma, but incompletely known.

#### Rhytismites hederze (Heer), Meschinelli.

1882. Rhytisma hederæ, Heer, Flora foss. Grönlands, p. 20, pl. xxiv, fig. 6 a.

1892. Rhytismites hederæ, Meschinelli, Syll. Fung. foss., p. 781.

1902. Rhytismites hederæ, Meschinelli, Fungor. foss. omnium Iconog., p. 57, pl. xvii, fig. 5.

Horizon.-Upper Cretaceous (Atane Beds).

Locality.—Greenland.

TYPE.—Heer's specimen in University Geological Museum, Copenhagen, on leaf of Hedera primordialis.

Very many further specimens of the Greenland leaves, not only of *Hedera* but of other genera, show circular markings similar to those described by Heer as his fungus *Rhytisma hederæ*. A number of excellent specimens are in Prof. Nathorst's collection in Stockholm, and a comparison of these with Heer's original, and with other specimens, suggests strongly that the markings are truly organic but are those of galls, and not fungi.

The same conclusion is suggested for *Phaeidium myrtophylli* described by Engelhardt (1892 A, p. 80, pl. ii, figs. 10 a, b).

Further "genera" which are probably due to GALLS are:-

Puccinites cretaceus, Velenovsky, 1889, p. 26, pl. iii, fig. 14, which is also the same as Uredinites cretaceus, Velenovsky, 1889, p. 29, fig. 1, a-b.

Phacidites communis (Feistmantel), Meschinelli, 1902, p. 54. = Phacidium commune, Feistmantel, 1874, p. 266.

Sclerotites sp. (Knowlton), Meschinelli, 1902, p. 99. = Sclerotium sp., Knowlton, 1892, p. 23, pl. lix, fig. 4.

OTHER PHENOMENA DESCRIBED AS DISCOMYCETES:-

#### Genus HYSTERITES, Meschinelli.

[In Saccardo, Sylloge Fungorum, x, p. 774.]

#### Hysterites protogæus (Heer), Meschinelli.

1882. Hysterium protogœum, Heer, Flora foss. Grönlands, p. 20, pl. xxiv, figs. 9, 9 a.

1892. Hysterites protogæus, Meschinelli, Syll. Fung. foss., p. 774.

1902. Hysterites protogæus, Meschinelli, Fungor. foss. omnium Iconog., p. 24, pl. xv, figs. 6, 6 α.

Horizon.—Upper Cretaceous (Atane Beds).

LOCALITY. -- Greenland.

Type.—Heer's specimen in University Geological Museum, Copenhagen.

The twig on which the so-called fungus was detected by Heer (1882) appears to be that of a dicotyledon, which though it is not described by Heer is very common in the Greenland beds. The one specimen with the "fungus" which Heer mentions, he supposes to be a gymnosperm; but even superficially it appears much more like a dicotyledonous twig. In Stockholm, in Prof. Nathorst's rich collections of Arctic plantfossils there are a number of similar stems which all show the small markings Heer took to be a fungus, but which bear the strongest likeness to lenticels.

Hysterites protogeeus, in short, seems to be nothing but normal lenticels on woody twigs.

#### Order HYPHOMYCETES.

## Genus CERCOSPORITES, nom. nov.

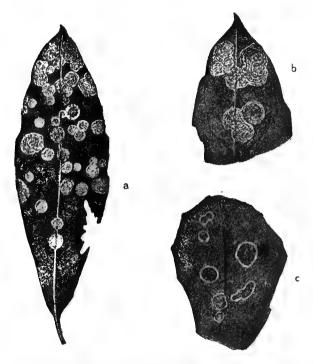
Presumably with the characters of the living genus Cercospora, but incompletely known.

## Cercosporites coriococcus (Bayer), nom. nov.

1899. Cercospora coriococcum, Bayer, Sitzungsber. k. böhm. Ges. Wiss. Prag. p. 4, text-figs. 1, 1 a, 2.

1901. Cercospora coriococcum, Bayer, in Fritsch & Bayer, Studien böhm. Kreidepfl., p. 66, text-fig. 2.

The fungus forms roundish, sharply delineated patches, generally distinct from each other but sometimes merging.



Text-fig. 24.—Cercosporites coriococcus (Bayer). a. Leaflet of Dewalquea coriacea covered with the fungus, natural size. b. A small portion enlarged twice to show the surface character of the fungal patches. c. Portion of leaf of Hedera primordialis showing the same fungus. After Bayer.

These are 2-5 mm. in diameter, with a surface marked by series of concentric striations; in some cases the centre is slightly depressed. These patches lie both on the leaf-lamina and over the central nerve.

Host.—Leaves of Dewalquea coriacea, Aralia daphnophyllum, Hedera primordialis, and many others.

Horizon.—Upper Cretaceous (Perucer Beds).

Locality.—Vyserovic and Kounic, Bohemia. Very plentiful. These markings on the dicotyledonous leaves of the Bohemian Perucer Beds are undoubtedly very characteristic and easy to recognise. I have seen them in other collections of Bohemian plants, and think it very probable that they do truly represent fungal remains, though the nature of the impressions does not allow of microscopic examination or of exact determination.

#### Order BASIDIOMYCETES?

#### Genus TRAMETITES, Meschinelli.

[In Saccardo, Sylloge Fungorum, x, p. 747.]

Presumably with the characters of the living genus Trametes but incompletely known.

#### Trametites Pini (Conwentz), Meschinelli.

1892. Trametes Pini, Conwentz, Unters. foss. Hölz. Schwed., pp. 13, 21, pl. vii, fig. 1.

1892. Trametites Pini, Meschinelli, Syll. Fung. foss., p. 747.

1902. Trametites Pini, Meschinelli, Fungor. foss. omnium Iconog., p. 6, pl. iv, fig. 5.

Meschinelli defines the species as follows:—Cl. doct. Conwentz innumeras mycelii reliquias, lignum illud dum viveret a parassitis vexatum ostendentes, in speciminibus suecicis invenit. Hyphæ tenues, jalinæ, cinereæ, brunneæ et quandoque atrocinereæ ad nigritudinem, ligni in directionem verticalem discurrunt."

In describing some Gymnospermic petrified woods from Sweden, Conwentz (1892) mentioned the frequent occurrence in them of fungal hyphæ. He gives a figure and short description of them and associates the name Trametes Pini with the fungus, though he does not absolutely identify it as such.

Host.-Wood of Pinus Nathorsti.

Horizon. - Senonian.

LOCALITY. - Sweden.

Type.—Conwentz' slide in Palæobotanical Museum, Stockholm.

Meschinelli's figure is a reproduction of that of Conwentz, which shows the fungus in a low degree of magnification. The species may be taken to include the numerous hyphæ that are noticed in petrified woods of Cretaceous pines, though it is probably not a true biological species.

#### Genus TRICHOSPORITES, Felix.

[Zeitschr. deutsch. geol. Ges., vol. 46, 1894, p. 273.]

Presumably with the characters of the living genus Trichosporium, but incompletely known.

#### Trichosporites Conwentzi, Felix.

1892. "Cf. Trichosporium fuscum," Conwentz, Unters. foss. Hölz. Schwedens, p. 27, pl. vii, fig. 9.

1894. Trichosporites Conwentzi, Felix, Zeitschr. deutsch. geol. Ges., vol. 46, p. 273.

Branched, septate hyphæ, conidia egg-shaped or oval, circular when seen from one end. Composed of one cell, apparently undivided, and of dark, red-brown colour.

Host.-Wood of Cedroxylon Ryedalense.

Horizon.-Senonian.

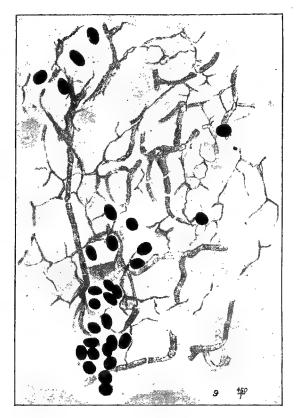
Locality.—Ryedal, Sweden.

Type.—Palæobotanical Museum, Stockholm.

The specific name and some description of this fungus appear in Felix's paper on Fossil Fungi (Felix, 1894), but it was figured by Conwentz in his paper on the petrified woods of Sweden (Conwentz, 1892), who described the effects of the fungus on the wood, Cedroxylon Ryedalense, and noted that the hyphæ are thick-walled, branched, and septate.

Conwentz' illustrations of the hyphæ and conidia are reproduced in the text-figure 25 (p. 280).

While the name appears to be unfortunate in being too suggestive of affinities with a living genus where such affinity cannot be established from the data at present available, it seems better to leave it than to multiply poorly established specific names.



Text-fig. 25.— Trichosporites Conwentzi, Felix; hyphæ and conidia.

After Conwentz.

# PHENOMENA DESCRIBED AS FUNGI, OF WHICH THE NATURE IS VERY DOUBTFUL:—

Xylomites ellipticus, Ettingshausen, 1867 A, p. 243, pl. i, fig. 7. "Peritheciis ellipticis planis, disco centrali vix distinguendo."

This "fungus" takes the form of small oval markings on the impression of the leaf of *Ficus Geinitzii*. Ettingshausen considered that there could scarcely be any doubt that the appearance is due to a fungus. Phacidium Palæocassiæ, Ettingshausen, 1867 A, p. 242, pl. i, figs. 8, 8b. "Peritheciis irregularibus polygonis depressis, disco subrotundato, pallido."

This is also a mere marking on a leaf-impression which may or may not be due to a fungus, but about which there is no clear evidence in the specimens themselves.

Sphærites myricæ (Lesquereux), Meschinelli, 1892, and 1902, p. 29 (=Sphæria myricæ, Lesquereux); and also Sphærites Lesquereuxi, Meschinelli, 1892, & 1902, p. 38 (=Sphæria rhytismoides, Lesquereux), are two other markings on leaves for which there is little evidence to support their claims to being fungi.

Stichus mermisoides, Etheridge, 1904, pp. 255-257, pls. xxx-xxxi. Described as an endophytic fungus in the shells of a Cretaceous bivalve. The plates, however, are far from convincing.

So-called "Fungi" which are probably inorganic pseudomorphs:—

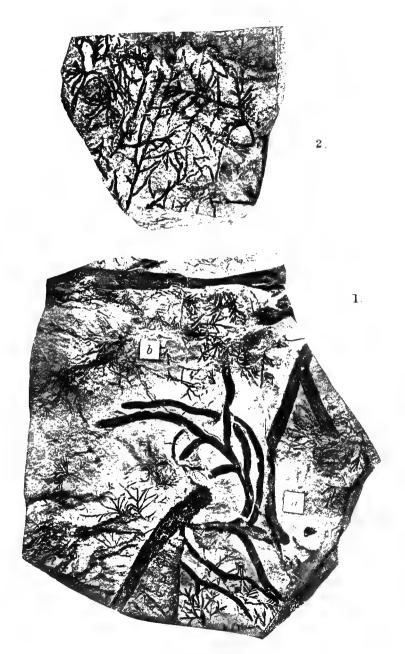
Sclerotites sp., Geinitz, 1842, pp. 99 & xxii, pl. xxiv, figs. 1-3. Xylomites aggregatus, Heer, 1882, p. 21, pl. xxix, fig. 11.

Rosellinites lepideus (Lesquereux), Knowlton, 1898, p. 204. = Sphæria lapidea, Lesquereux, 1873, p. 373, & 1878 B, p. 34, pl. i, fig. 3.

#### PLATE I.

- Fig. 1. A slab of rock from the Cretaceous Flysch, with a. Algites furcatus (p. 255), and b. Chondrites intricatus (p. 252).

  Nat. size.
- Fig. 2. Chondrites patulus. Nat. size. (p. 253)

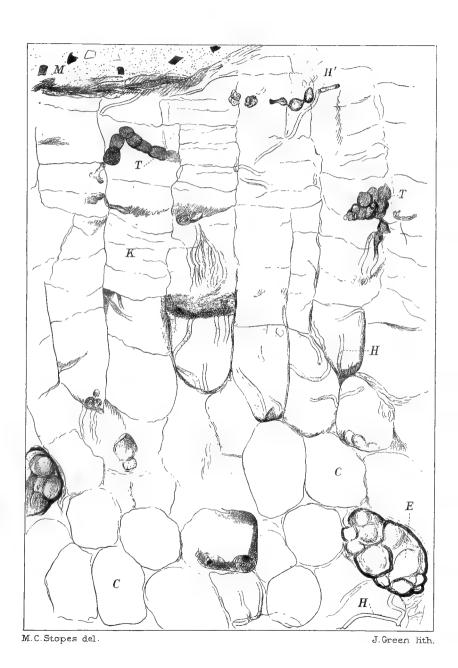


J.Green Photo imp. la.ALGITES FURCATUS. 1b.CHONDRITES INTRICATUS. 2.CHONDRITES PATULUS.

#### PLATE II.

- Part of the outer cortex and periderm of the Angiospermic stem Saururopsis which is infested by the fungus Petrosphæria japonica, Stopes & Fujii. V. 11969.
- M. The outer limit of the stem, slightly crushed and destroyed adjacent to the granular mineral matrix of the section.
- K. Cells of periderm layers in which hyphæ and other cells of the fungus are principally developed.
- C. Inner cells of cortex in which are hyphæ of fungus, but no other fungal cells which appear to have been vital at the time of petrifaction.
- H. Fungal hyphæ, at H' a part showing the septate condition.
- T. Groups of thickened cells of the fungus.
- E. Cells in the cortex containing blackened "frothy" substance which may be due to the fungal cells, or may be due to some natural secretion of the plant.

Magnification  $\times$  300. (p. 270)



PETROSPHÆRIA JAPONICA, Stopes & Fujii.

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